

LA-UR-18-29481

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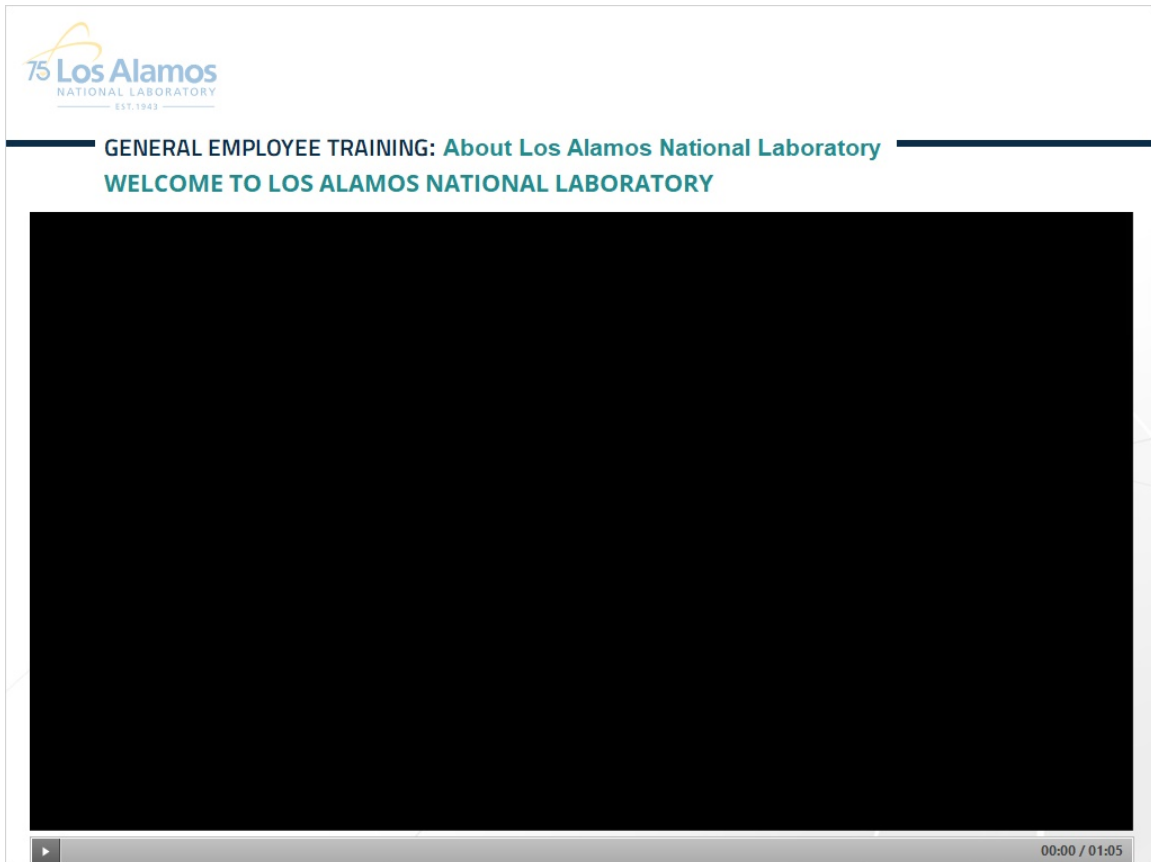
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General Employee Training Online SS 43094

8.1 Introduction



8.2 GENERAL EMPLOYEE TRAINING

This course has been reviewed by the Classification Group
and has been determined to contain no classified or sensitive information.
LA-UR-18-29481

Self-Study #43094

GENERAL EMPLOYEE TRAINING

1

Working
at the
Laboratory

2

Working
Safely

3

Working
Healthy

4

Working
Securely

5

Working
with Quality
and Policies

6

General
Employee
Radiological
Training

You must view every slide in order to receive credit for this course.

NOTE: **DO NOT** use your browser's back button to navigate this course.

SORRY (Slide Layer)

This course has been reviewed by the Classification Group
and has been determined to contain no classified or sensitive information.
LA-UR-18-29481

Self-Study #43094

GENERAL EMPLOYEE TRAINING

Sorry.
You cannot access that section until you
have completed the previous sections

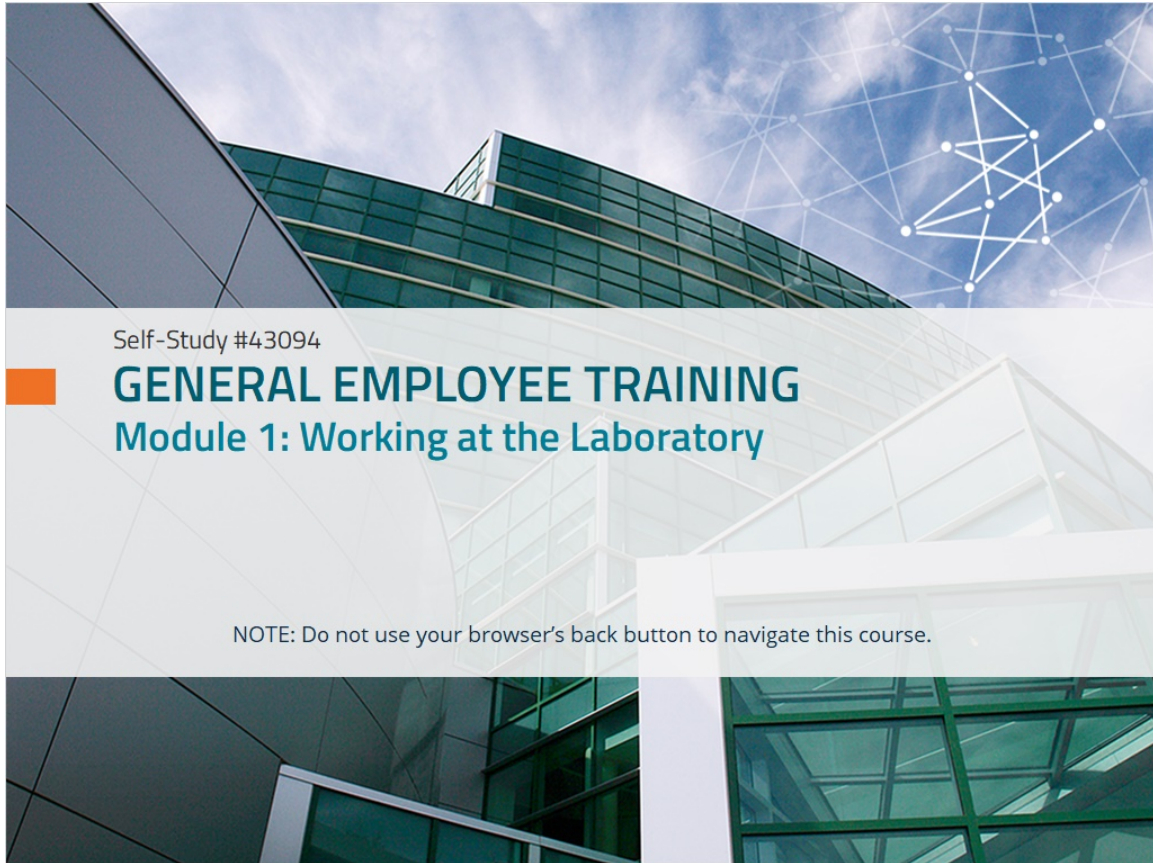
- RETURN TO MENU -

You must view every slide in order to receive credit for this course.

NOTE: **DO NOT** use your browser's back button to navigate this course.

1. LANL

1.1 GENERAL EMPLOYEE TRAINING



Self-Study #43094

GENERAL EMPLOYEE TRAINING
Module 1: Working at the Laboratory

NOTE: Do not use your browser's back button to navigate this course.

1.2 Objectives

GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory** **OBJECTIVES**

In This Section

By using this section, you will recognize basic information about the General Employee Training (GET) Program; Los Alamos National Laboratory's (LANL's or the Laboratory's) history, current vision, mission, and values; and how we serve the nation today.

What You Will Learn

When you have completed this section, you will:

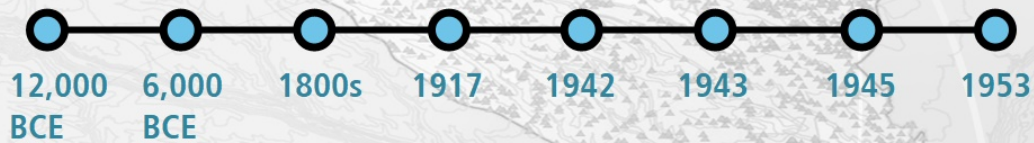
1. Understand the history of Los Alamos
2. Identify how the Laboratory promotes workplace civility
3. Recall the Laboratory's commitment to the environment
4. Demonstrate how to get around the Laboratory
5. Recognize basic emergency operations

1.3 History

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LANL AREA HISTORY

The history of Los Alamos National Laboratory and the Los Alamos townsite is both long and distinguished. The early history of the area spans more than a dozen millennia from the original people of the Pajarito Plateau, who came to the valley lowlands and upland plateaus to forage and hunt more than 12,000 years ago, to the Spanish homesteaders of the late 19th century, who built the area's first farms and ranches. From the Manhattan Project in World War Two to the end of the Cold War, the modern history of Los Alamos is one in which the Laboratory has changed the world.



[Click the timeline to learn more about the history of the Los Alamos area.](#)

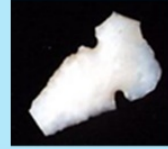
12,000BCE (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LANL AREA HISTORY

Original People of the Pajarito Plateau

Humans have lived in the area that now makes up much of Los Alamos County and LANL for roughly 12,000 years. These Paleoindian inhabitants were small groups who moved seasonally between the valley lowlands and upland plateau while foraging for wild plants, harvesting fruits and nuts, and hunting animals, especially bison in the lowland grasslands. Evidence of their occupation is found in the 12,000-year-old white chalcedony Clovis spearpoints discovered at Bandelier National Monument, which sits on the Pajarito Plateau along the border between Los Alamos and LANL property.



[Click the timeline to learn more about the history of the Los Alamos area.](#)

6000 BCE (Slide Layer)

GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory**

LANL AREA HISTORY

Archaic Period (6000 to 500 BCE)

The visitors became permanent residents, shifting their residences to the uplands where they continued to forage, often collecting piñon nuts and hunting deer rather than bison. By the late-12th to mid-16th century villages on the Pajarito Plateau flourished. The Native Americans hunted wild game and raised maize, squash, beans, and even domesticated turkeys.



[Click the timeline to learn more about the history of the Los Alamos area.](#)


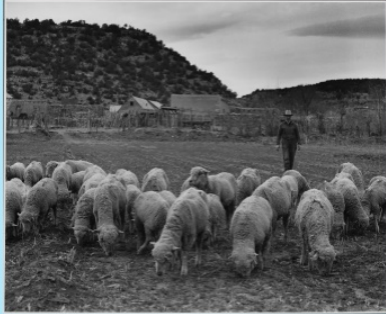
1800s (Slide Layer)

GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory**

LANL AREA HISTORY

Spanish Homesteaders

In the latter part of the 19th century, the descendants of Spanish settlers used the Los Alamos area for summer grazing of sheep and seasonal bean farming. Permanent homesteads were established not long thereafter.



Click the timeline to learn more about the history of the Los Alamos area.


1942 (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LANL AREA HISTORY

The Manhattan Project

In the fall of 1942, the US government initiated the Manhattan Project, a secret World War II effort to create the world's first nuclear weapon. General Leslie Groves was appointed to oversee the wartime project. J. Robert Oppenheimer, a professor of physics at the University of California-Berkeley, was selected to lead the scientific endeavor.



12,000
BCE

6,000
BCE

1800s

1917

1942

1943

1945

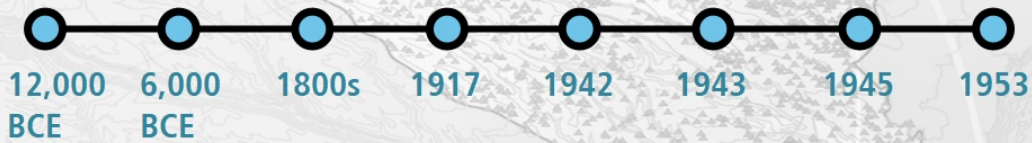
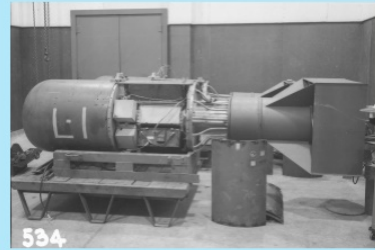
1953

Click the timeline to learn more about the history of the Los Alamos area.

1943 (Slide Layer)

The Manhattan Project continued

The Laboratory was established in 1943 as Site Y of the Manhattan Project for a single purpose: to design and build an atomic bomb. It took 20 months of intense work in the fields of nuclear physics, high explosives, and electrical engineering until, on July 16, 1945, the world's first atomic bomb was detonated at Trinity Site on the Alamogordo bombing range. Three weeks later, Little Boy, a uranium gun-type weapon, was used on Hiroshima, Japan, and Fat Man, an implosion plutonium bomb, was dropped on Nagasaki. One week later the Japanese Empire surrendered, ending one of the bloodiest conflicts in modern history.



[Click the timeline to learn more about the history of the Los Alamos area.](#)

1945 (Slide Layer)

The Cold War

Following the success of the Manhattan Project and the end of the war, Oppenheimer and many of the others who had been recruited Site Y personnel went back to their respective academic and research institutions. However, a core group of scientists and technicians stayed to carry on the work. They would push the success of the Laboratory to even greater heights.

Norris Bradbury replaced Oppenheimer as director of the Laboratory in 1945. Bradbury had directed the testing of the device at Trinity and acknowledged a duty to continue the work begun at Los Alamos during the war. Upon taking over, he commented, "I feel that the bear which we have caught by the tail is so formidable that there is a strong obligation upon us to find out how to let go or hang on."

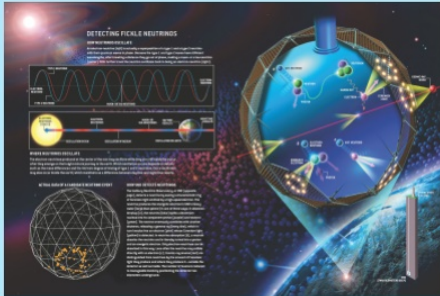


[Click the timeline to learn more about the history of the Los Alamos area.](#)

1953 (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LANL AREA HISTORY



Cold War continued

If the Manhattan Project made Los Alamos science famous, it was the Laboratory's Cold War scientific work that made it a global science powerhouse. From the development of the hydrogen bomb in 1952 to the discovery of neutrinos in 1953, as well as the hundreds of breakthroughs in the fields of astrophysics, biology, computing, electronics, energy, explosives, geology, materials science, physics, and radiochemistry, Los Alamos science helped the United States win the Cold War.



Click the timeline to learn more about the history of the Los Alamos area.

1917 (Slide Layer)

GENERAL EMPLOYEE TRAINING: [About Los Alamos National Laboratory](#)

The Los Alamos Ranch School


For 25 years, starting in 1917, the Los Alamos Ranch School was an exclusive prep school for boys aged 12 to 18. Founded by Ashley Pond, the Ranch School combined a wilderness experience of hiking, skiing, and horseback riding with a rigorous academic program.

Several buildings of the Ranch School still remain in Los Alamos' downtown area. Fuller Lodge was the dining and recreation building. The houses north of Fuller Lodge, along a short street called Bathtub Row, housed school staff and provided some of the classroom space.



[Click the timeline to learn more about the history of the Los Alamos area.](#)

1.4 Directors



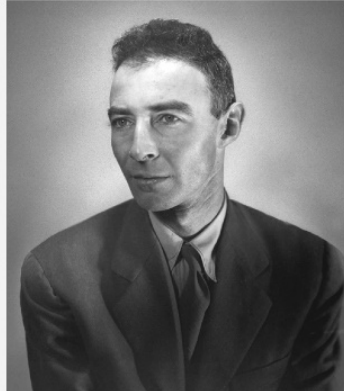





A vertical timeline on the left side of the screen, consisting of a black line with 11 yellow circular markers. Each marker is positioned next to the name and tenure of a Laboratory Director.

Director	Tenure
J. Robert Oppenheimer	(1943-1945)
Norris Bradbury	(1945-1970)
Harold M. Agnew	(1970-1979)
Donald M. Kerr	(1979-1985)
Siegfried S. Hecker	(1985-1997)
John C. Browne	(1997-2003)
G. Peter Nanos	(2003-2005)
Robert Kuckuck	(2005-2006)
Michael R. Anastasio	(2006-2011)
Charles McMillan	(2011-2017)
Terry Wallace	(2018-2018)
Thomas E. Mason	(2018-Present)













Laboratory Directors

Since its founding, the Laboratory has had 11 Directors. Click on the circle next to each director on the left side of the screen to discover additional facts.

oppie (Slide Layer)

 J. Robert Oppenheimer (1943-1945)	 J. Robert Oppenheimer (1943-1945) The Laboratory's first Director, Oppenheimer was a professor of physics at the University of California-Berkeley before being recruited by General Leslie Groves Jr. to oversee the construction of the Los Alamos laboratory of the Manhattan Project and lead the scientific development of the atomic bomb. Dr. Oppenheimer received his Bachelor's degree from Harvard University in 1925 and Ph.D. from University of Göttingen (Germany) in 1927.
 Norris Bradbury (1945-1970)	
 Harold M. Agnew (1970-1979)	
 Donald M. Kerr (1979-1985)	
 Siegfried S. Hecker (1985-1997)	
 John C. Browne (1997-2003)	
 G. Peter Nanos (2003-2005)	
 Robert Kuckuck (2005-2006)	
 Michael R. Anastasio (2006-2011)	
 Charles McMillan (2011-2017)	
 Terry Wallace (2018-2018)	
 Thomas E. Mason (2018-Present)	

bradbury (Slide Layer)













-  **J. Robert Oppenheimer**
(1943-1945)
-  **Norris Bradbury**
(1945-1970)
-  **Harold M. Agnew**
(1970-1979)
-  **Donald M. Kerr**
(1979-1985)
-  **Siegfried S. Hecker**
(1985-1997)
-  **John C. Browne**
(1997-2003)
-  **G. Peter Nanos**
(2003-2005)
-  **Robert Kuckuck**
(2005-2006)
-  **Michael R. Anastasio**
(2006-2011)
-  **Charles McMillan**
(2011-2017)
-  **Terry Wallace**
(2018-2018)
-  **Thomas E. Mason**
(2018-Present)



Norris Bradbury (1945-1970)

Born in California and a graduate of Pomona College, Bradbury received his doctorate in physics and mathematics from the University of California-Berkeley in 1932. While working as a professor at Stanford University, Dr. Bradbury was called into active duty in World War II to serve at the Naval Proving Ground in Virginia. Sent to Los Alamos in 1944 to help assemble the high-explosive parts for the atomic bomb, Bradbury took over leadership of the Laboratory from Oppenheimer in 1945 and is widely credited with growing Los Alamos Scientific Laboratory into the world's leading national security science laboratory.

agnew (Slide Layer)



-  **J. Robert Oppenheimer**
(1943-1945)
-  **Norris Bradbury**
(1945-1970)
-  **Harold M. Agnew**
(1970-1979)
-  **Donald M. Kerr**
(1979-1985)
-  **Siegfried S. Hecker**
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(2011-2017)
-  **Terry Wallace**
(2018-2018)
-  **Thomas E. Mason**
(2018-Present)








Harold M. Agnew (1970-1979)

As the Laboratory's third Director, Harold Agnew managed the Laboratory through some of its most challenging times. He was educated at the University of Denver and received his master's and Ph.D. degrees from the University of Chicago, where he worked with Enrico Fermi and others to build the world's first nuclear reactor. Before becoming Director, Dr. Agnew served as a Democratic New Mexico State Senator from 1955 to 1961 and as Scientific Adviser to the NATO Supreme Allied Commander Europe.

kerr (Slide Layer)

	<p>J. Robert Oppenheimer (1943-1945)</p> <p>Norris Bradbury (1945-1970)</p> <p>Harold M. Agnew (1970-1979)</p> <p>Donald M. Kerr (1979-1985)</p> <p>Siegfried S. Hecker (1985-1997)</p> <p>John C. Browne (1997-2003)</p> <p>G. Peter Nanos (2003-2005)</p> <p>Robert Kuckuck (2005-2006)</p> <p>Michael R. Anastasio (2006-2011)</p> <p>Charles McMillan (2011-2017)</p> <p>Terry Wallace (2018-2018)</p> <p>Thomas E. Mason (2018-Present)</p>	 <p>Donald M. Kerr (1979-1985)</p> <p>Serving as the fourth Laboratory Director, Donald Kerr received his bachelor's degree in electrical engineering, M.S. in microwave electronics, and Ph.D. in plasma physics and microwave electronics from Cornell University. After serving as Director, Dr. Kerr went on to serve as Deputy Assistant Secretary and Acting Assistant Secretary for Defense Programs at the Department of Energy, Assistant Director of the Federal Bureau of Investigation, and Deputy Director for Science and Technology at the Central Intelligence Agency</p>
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hecker (Slide Layer)

	J. Robert Oppenheimer (1943-1945)
	Norris Bradbury (1945-1970)
	Harold M. Agnew (1970-1979)
	Donald M. Kerr (1979-1985)
	Siegfried S. Hecker (1985-1997)
	John C. Browne (1997-2003)
	G. Peter Nanos (2003-2005)
	Robert Kuckuck (2005-2006)
	Michael R. Anastasio (2006-2011)
	Charles McMillan (2011-2017)
	Terry Wallace (2018-2018)
	Thomas E. Mason (2018-Present)















Siegfried S. Hecker (1985-1997)
As Laboratory Director from 1985 through 1997, Sig Hecker was one of the principal architects of the Laboratory's science-based stockpile stewardship approach the United States' nuclear weapons arsenal. Dr. Hecker received his B.S., M.S., and Ph.D. in metallurgy from Case Western Reserve University. Before joining Los Alamos National Laboratory, he was a senior research metallurgist at General Motors. After serving as Laboratory Director, Hecker went on to become the Director of the Center for International Security and Cooperation at Stanford University and a senior fellow at the Freeman Spogli Institute for International Studies.

brown (Slide Layer)

	<p><i>J. Robert Oppenheimer</i> (1943-1945)</p> <p><i>Norris Bradbury</i> (1945-1970)</p> <p><i>Harold M. Agnew</i> (1970-1979)</p> <p><i>Donald M. Kerr</i> (1979-1985)</p> <p><i>Siegfried S. Hecker</i> (1985-1997)</p> <p><i>John C. Browne</i> (1997-2003)</p> <p><i>G. Peter Nanos</i> (2003-2005)</p> <p><i>Robert Kuckuck</i> (2005-2006)</p> <p><i>Michael R. Anastasio</i> (2006-2011)</p> <p><i>Charles McMillan</i> (2011-2017)</p> <p><i>Terry Wallace</i> (2018-2018)</p> <p><i>Thomas E. Mason</i> (2018-Present)</p>	 <p>John C. Browne (1997-2003)</p> <p>As the Laboratory's sixth Director, John Browne strengthened the Laboratory's science-based stockpile stewardship program and grew counterterrorism and intelligence research programs, all while leading the organization through some of its most politically challenging years. Dr. Browne received his B.S. in physics from Drexel University in Philadelphia and his Ph.D. in physics from Duke University. Before serving as Laboratory Director, Browne served as the Physics Division Leader and Los Alamos Neutron Science Center (LANSCE) Division Leader.</p>
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nanos (Slide Layer)

-  **J. Robert Oppenheimer**
(1943-1945)
-  **Norris Bradbury**
(1945-1970)
-  **Harold M. Agnew**
(1970-1979)
-  **Donald M. Kerr**
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(2006-2011)
-  **Charles McMillan**
(2011-2017)
-  **Terry Wallace**
(2018-2018)
-  **Thomas E. Mason**
(2018-Present)



G. Peter Nanos (2003-2005)

George Peter Nanos was Director of Los Alamos National Laboratory from 2003 through 2005. A former United States Navy vice admiral, Dr. Nanos received his bachelor's degree from the United States Naval Academy and his doctorate in physics from Princeton University. Before coming to Los Alamos, Nanos was Commander, Naval Sea Systems Command. Following his service as Laboratory Director, Nanos went on to become Associate Director of Research and Development at the Defense Threat Reduction Agency.

kuckuck (Slide Layer)

- **J. Robert Oppenheimer**
(1943-1945)
- **Norris Bradbury**
(1945-1970)
- **Harold M. Agnew**
(1970-1979)
- **Donald M. Kerr**
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(2011-2017)
- **Terry Wallace**
(2018-2018)
- **Thomas E. Mason**
(2018-Present)





Robert Kuckuck (2005-2006)

Robert Kuckuck received his B.S. degree in physics from West Liberty University, M.Sc. in physics from The Ohio State University, and Ph.D. in physics/applied science from the University of California. Kuckuck spent the majority of his professional career as a physicist at Lawrence Livermore National Laboratory, and also served as its Deputy Director. Before serving as Director at LANL, Kuckuck was the first principal deputy administrator of the National Nuclear Security Administration.

anastasio (Slide Layer)

 J. Robert Oppenheimer (1943-1945)	 Michael R. Anastasio (2006-2011) Michael Anastasio was Director of Los Alamos National Laboratory and President of Los Alamos National Security from 2006 to 2011. Before becoming Laboratory Director, Anastasio was the Director of Lawrence Livermore National Laboratory. He received his B.A. in physics, with honors, from Johns Hopkins University and his M.A. and Ph.D. in theoretical nuclear physics from the State University of New York, Stony Brook.
 Norris Bradbury (1945-1970)	
 Harold M. Agnew (1970-1979)	
 Donald M. Kerr (1979-1985)	
 Siegfried S. Hecker (1985-1997)	
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 Terry Wallace (2018-2018)	
 Thomas E. Mason (2018-Present)	

Mcmillian (Slide Layer)

	<p>J. Robert Oppenheimer (1943-1945)</p> <p>Norris Bradbury (1945-1970)</p> <p>Harold M. Agnew (1970-1979)</p> <p>Donald M. Kerr (1979-1985)</p> <p>Siegfried S. Hecker (1985-1997)</p> <p>John C. Browne (1997-2003)</p> <p>G. Peter Nanos (2003-2005)</p> <p>Robert Kuckuck (2005-2006)</p> <p>Michael R. Anastasio (2006-2011)</p> <p>Charles McMillan (2011-2017)</p> <p>Terry Wallace (2018-2018)</p> <p>Thomas E. Mason (2018-Present)</p>	 <p>Charles McMillan (2011-2017) As the tenth Director of the Laboratory and President of Los Alamos National Security, Dr. McMillan served from 2011 through 2017. Prior to becoming Laboratory Director, Dr. McMillan served as the Principal Associate Director for Weapons Programs. He holds a doctorate in physics from the Massachusetts Institute of Technology and a bachelor's degree in mathematics and physics from Washington Adventist University.</p>
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Wallace (Slide Layer)














- **J. Robert Oppenheimer**
(1943-1945)
- **Norris Bradbury**
(1945-1970)
- **Harold M. Agnew**
(1970-1979)
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(2011-2017)
- **Terry Wallace**
(2018-2018)
- **Thomas E. Mason**
(2018-Present)



Terry Wallace (2018)

Dr. Terry C. Wallace, Jr. was director of the Laboratory and president of Los Alamos National Security, LLC. Prior to becoming Laboratory Director, Dr. Wallace was the Laboratory's Principal Associate Director for Global Security and the Senior Intelligence Executive, leading national security programs, nonproliferation, counterproliferation, and industry partnerships. He also served as the Principal Associate Director for Science, Technology, and Engineering. He holds doctorate and master's degrees in geophysics from the California Institute of Technology and bachelor's degrees in geophysics and mathematics from New Mexico Institute of Mining and Technology.

Mason (Slide Layer)

           	<p><i>J. Robert Oppenheimer</i> (1943-1945)</p> <p><i>Norris Bradbury</i> (1945-1970)</p> <p><i>Harold M. Agnew</i> (1970-1979)</p> <p><i>Donald M. Kerr</i> (1979-1985)</p> <p><i>Siegfried S. Hecker</i> (1985-1997)</p> <p><i>John C. Browne</i> (1997-2003)</p> <p><i>G. Peter Nanos</i> (2003-2005)</p> <p><i>Robert Kuckuck</i> (2005-2006)</p> <p><i>Michael R. Anastasio</i> (2006-2011)</p> <p><i>Charles McMillan</i> (2011-2017)</p> <p><i>Terry Wallace</i> (2018-2018)</p> <p><i>Thomas E. Mason</i> (2018-Present)</p>	 <p>Thomas E. Mason (2018-Present)</p> <p>As the current President and CEO of Triad National Security, Dr. Thomas Mason became Director of Los Alamos National Laboratory in November 2018. Prior to joining Battelle Memorial Institute, where he was Senior Vice President for Global Laboratory Operations, Dr. Mason worked at Oak Ridge National Laboratory for 19 years, including serving as the Laboratory Director from 2007 to 2017. Mason received his Ph.D. in Experimental Condensed Matter Physics from McMaster University and Bachelor's degree in Physics from Dalhousie University.</p>
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1.5 Organizational Structure

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory LANL ORGANIZATIONAL STRUCTURE

LANL is a federally funded research and development center under the Department of Energy's (DOE's) National Nuclear Security Administration (NNSA).

The Laboratory is currently managed by Triad National Security, LLC, or Triad, which is comprised of three members: Battelle Memorial Institute, The Texas A&M University System, and The University of California.

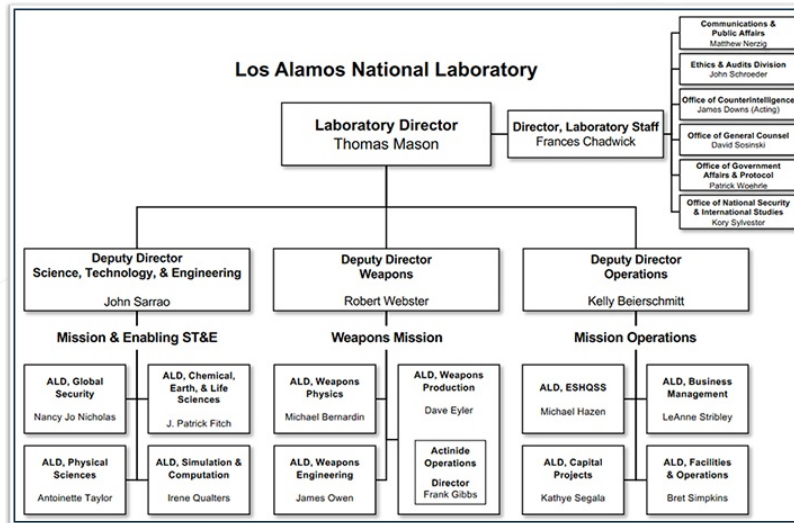


1.6 Leadership Team

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LANL ORGANIZATIONAL STRUCTURE

Under the Laboratory Director, the Laboratory is organized into three directorates: Science, Technology and Engineering; Weapons; and Operations. Under these directorates, there are eleven associate laboratory directorates.



1.7 Laboratory Goals

GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory**

LABORATORY GOALS



GOALS

We will

Deliver national nuclear security and broader global security solutions, and

Foster excellence in science and engineering disciplines essential for national security in the next decade and beyond

By

Attracting, inspiring, and developing talent to ensure a vital future workplace, and

Enabling mission delivery through next-generation facilities, infrastructure, and operational excellence.

1.8 Laboratory Mission, Vision and Values

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

MISSION, VISION, AND VALUES

In addition to our goals and strategy, we have a mission, a vision for how we intend to achieve that mission, and a set of values that underpin that vision.

MISSION

Our mission is to solve national security challenges through scientific excellence.

VISION

Our vision is to deliver science and technology to protect our nation and promote world stability.

VALUES

SERVICE:

Serving our country, our partners, our community, and each other.

EXCELLENCE:

Ensuring timely mission execution through scientific, operational, and business excellence.

INTEGRITY:

Building trust through intellectual honesty, ethical conduct, and individual responsibility.

TEAMWORK:

Collaborating with colleagues and partners, respecting diverse opinions and backgrounds, vigorously debating alternatives, and coming together to achieve the best solutions.

STEWARDSHIP:

Being good stewards of the taxpayers' dollars, the Laboratory, our community, and the environment.

SAFETY AND SECURITY:

Ensuring that safety and security are integral to everything we do.

1.9 Workplace Civility

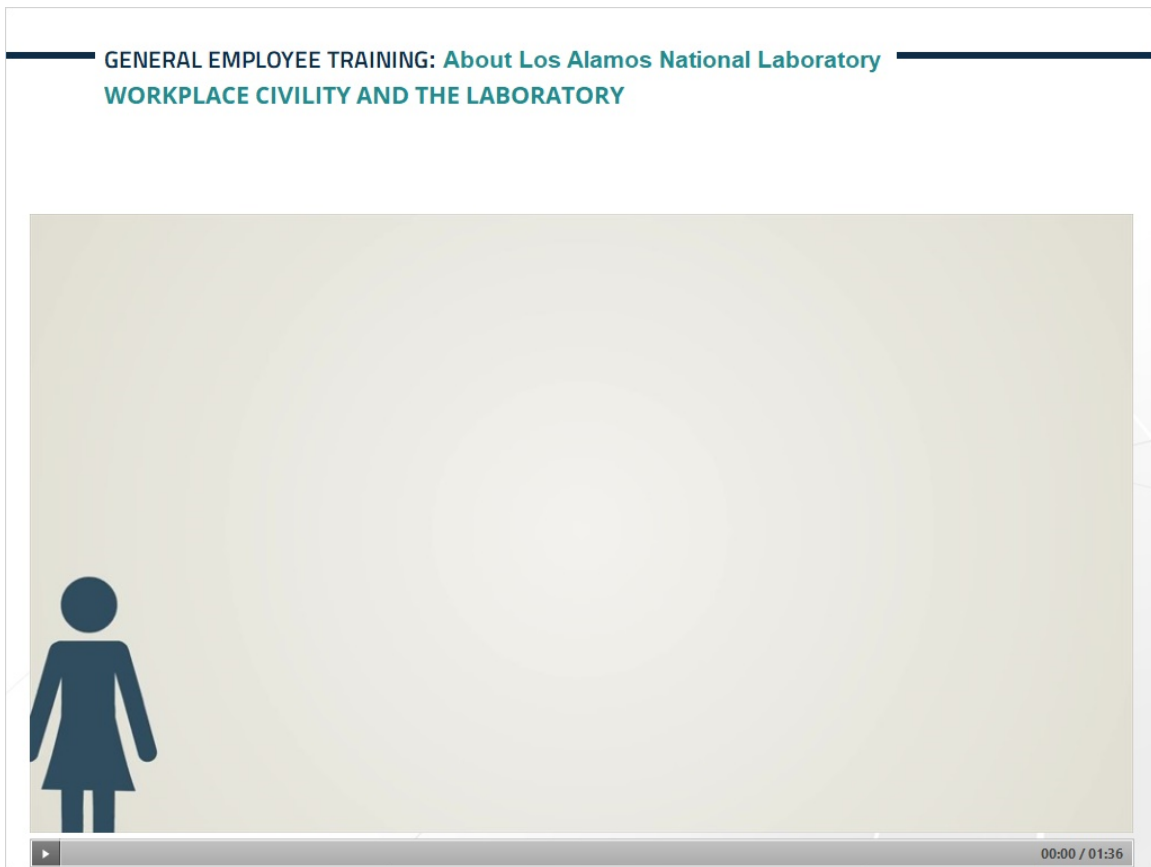
GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

WORKPLACE CIVILITY AND THE LABORATORY

As adults, we spend the majority of our waking hours at work. It is where many of our most active and familiar relationships are formed. Over time, we bring outside values, norms, and beliefs into the workplace. We get comfortable with our behaviors—both positive and negative—and as a result our professional boundaries become blurred. This familiarity, coupled with the diverse cultural beliefs, divergent values, and different expectations that constitute our Laboratory's culture, can lead to lapses in mutual respect and courtesy toward our co-workers. These lapses in workplace civility can significantly and negatively impact both the recipients of uncivil behavior and the workplace as a whole.

The next slide contains audio, please make sure the volume is turned up.

1.10 Incivility



1.11 Silence to Dialog

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

WORKPLACE CIVILITY AND THE LABORATORY

The *From Silence to Dialogue* initiative seeks to create a healthy culture at the Laboratory by transforming silence around acts of incivility, disrespect, and micro-aggressions to dialogue through awareness and empowerment as an active bystander.

A bystander is anyone who sees or otherwise becomes aware of behavior that appears worthy of comment or action. Active bystanders work to highlight positive acts that might otherwise be invisible or overlooked and redirect or de-escalate negative acts that might be problematic. Much like training that started in respect to topics like safety and diversity, training for active bystanders is pertinent to many kinds of behavior to encourage the positive and discourage the negative.

The goal of creating awareness around healthy culture and opportunities for training on how to speak up, the goal is to improve morale and collegiality, build community, and foster inclusion. Educational presentations on topics like creating psychologically safe workplaces will build awareness of unhealthy behavior around disrespect, bias, and incivility. Workshops and training will provide the opportunity to learn and practice how to speak up during challenging encounters.

More information, events, presentations, and training on how to speak up as an active bystander is available at: <http://int.lanl.gov/employees/health-wellness/bystander-intervention/index.shtml>

1.12 Environment

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

IT'S YOUR ENVIRONMENT

Los Alamos National Laboratory is committed to an environmental management strategy aimed at reducing the Laboratory's environmental impacts, while still maintaining or increasing operating efficiencies.

Environmental Laws, Regulations, and Laboratory Requirements

Every LANL worker is responsible for protecting the environment. It is your responsibility to be well-acquainted with LANL environmental policies that pertain to your job function. These policies satisfy federal and state environmental laws and regulations. You will find the resources you need to perform your job in accordance with federal, state, and LANL environmental protection requirements by clicking the Environment link on the internal LANL homepage. As with any work performed at the Laboratory, remember that both the work and the worker need to be authorized.

Consequences of Noncompliance

Not complying with laws and regulations can result in fines and program closures, as well as damage to human health and the environment. You can be held personally responsible for deliberately violating environmental protection.

To learn more about LANL's environmental strategies visit **EMS Environmental Awareness Training (32461)**. <https://extrain.lanl.gov/training/32461/page00.html>

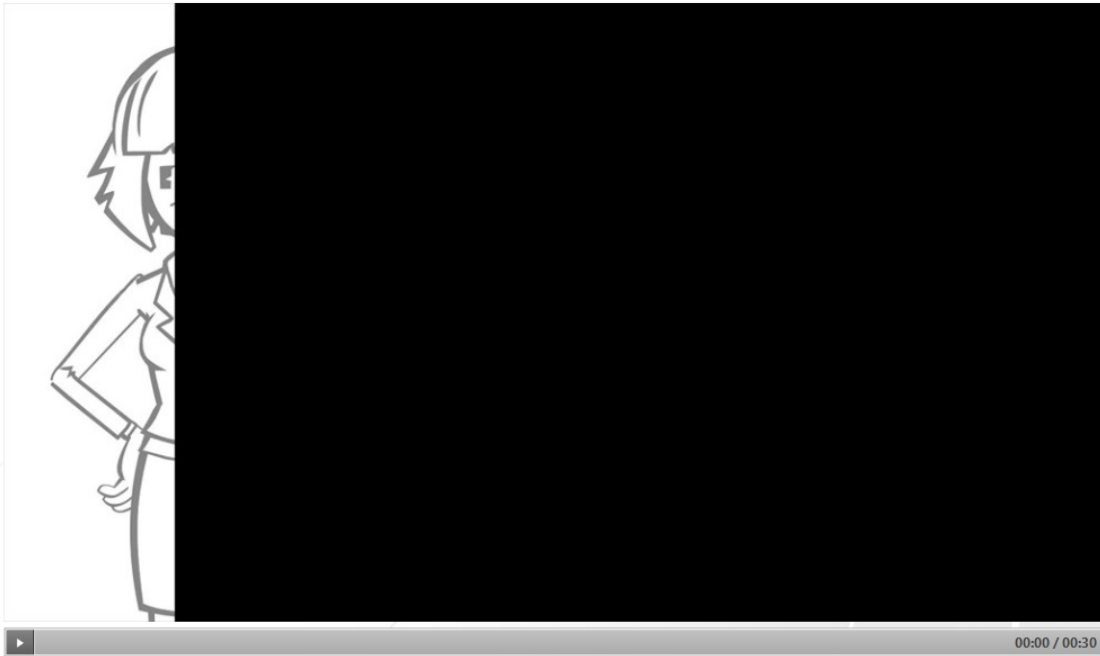
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1.13 Building Designations

GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory**

GETTING AROUND LOS ALAMOS COMPLEX

You will need to know a few things about building designation, locating buildings, parking, and commuting options around the LANL Complex. Let's get started



1.14 Find your building

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

LOCATE YOUR BUILDING

LANL Inside

intlanl.gov

LANL External phone maps alerts TA-72 LANL RADIO

Fire Danger Ratings: **Red Flag** INFOCON Alert Level: CHARLIE SECON Alert Level: 3
Stop Work in restricted areas 12:00 PM 09:00 PM

LANLINSIDE SEARCH SITE

75 Los Alamos NATIONAL LABORATORY 1943

COMPUTING EMPLOYEES ENVIRONMENT FINANCE NEWS SAFETY SCIENCE SECURITY SERVICES

03-0261 Alerts

TRAFFIC

Truck Route: Expect delays between Omega Bridge and TA-72 for repaving during daylight hours. Expect and plan for delays due to partial or full lane closures. Follow all signage and traffic laws. Click arrow for more.





TRAFFIC

Bikini Atoll Road: A 15 MPH zone in place where heavy equipment and workers enter/exit the construction area at the SCC.

All News

Top News

79°F
Updated 6/22/18 10:51 AM



1.15 Parking limitations

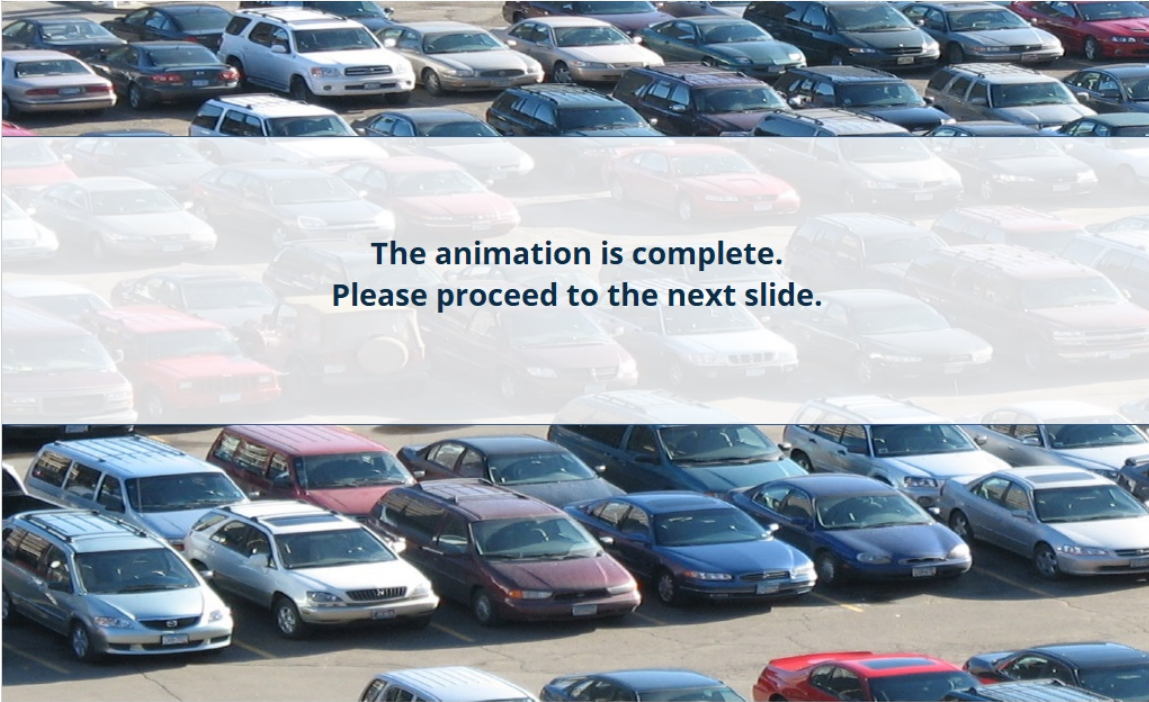
GENERAL EMPLOYEE TRAINING: **About Los Alamos National Laboratory**

PARKING AT LANL



Untitled Layer 1 (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory PARKING AT LANL



1.16 Commuting options

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

COMMUTING OPTIONS

LANL Inside

intlanl.gov

LANL External phone maps orgs alerts emergency library

LANL RADIO

Fire Danger Rating: **Red Flag**

INFOCON Alert Level: CHARLIE

SECON Alert Level: 3

Stop Work in restricted areas 12:00 PM - 09:00 PM

LANLINSIDE

SEARCH SITE

75 Los Alamos NATIONAL LABORATORY

COMPUTING EMPLOYEES ENVIRONMENT FINANCE NEWS SAFETY SCIENCE SECURITY SERVICES

Alerts

TRAFFIC

Truck Route: Expect delays between Omega Bridge and TA-72 for repaving during daylight hours. Expect and plan for delays due to partial or full lane closures. Follow all signage and traffic laws. Click arrow for more.

TRAFFIC





Bikini Atoll Road: A 15 MPH zone in place where heavy equipment and workers enter/exit the construction area at the SCC.

All News

Top News

82°F

Updated 6/22/18 11:32 AM



1.17 Emergency

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Emergency Operations

LANL's Emergency Management Division serves the Laboratory, DOE/NNSA, and the surrounding community by providing emergency planning, preparedness, and response services to minimize or mitigate the consequences of an emergency incident; protect the health and safety of workers, the public, and the environment; and ensure national security.

The Emergency Operations Support Center (EOSC) is staffed continuously day and night. During any event when you need to call 911, you should also call the EOSC at 505-6367-6211. The EOSC may also issue protective actions to employees during an emergency incident.

Note: It is a good idea to add the LANL EOSC as a contact on your cell phone at 505-667-6211. You might want to do that right now.

1.18 BEP Emergency

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Building Emergency Plans and Maps

An important part of emergency preparedness is knowing what to do in an emergency situation BEFORE the emergency happens.

Each LANL building or work area has a building emergency plan/procedure, Emergency Evacuation Diagram (EED), and/or a Building Emergency and Evacuation Plan. These documents provide emergency response information for the location, including the building's main hazards; the four protective actions of evacuate, shelter-in-place (SIP), remain indoors and lockdown. In your new work area, you should

- 1** | Find and become familiar with the building emergency plan/procedure including Emergency Evacuation Diagram or Building Emergency and Evacuation Plan maps posted in your work area; including the protective actions and how to respond.
- 2** | Know at least two ways out of your building.
- 3** | Know your Technical Area and building number.
- 4** | Become familiar with alarms in your work areas.
- 5** | Review the site evacuation map and know the routes for your work location.
- 6** | Talk with your supervisor about what to do in an emergency, and ask questions to ensure you fully understand.
- 7** | Keep your location and contact information up to date in Oracle to ensure that you receive protective action notifications including laboratory closures and delays.

1.19 Evacuation

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Emergency Reporting

Workers must immediately report an emergency as soon as it is safe to do so. Initial emergency reporting must be made promptly, accurately, and effectively by an on-scene observer/worker who is knowledgeable of the incident.

1

Call 911

Note: If the emergency is due to a fire, pull the fire alarm prior to calling 911.

2

Call the local facility-level operations center
(if applicable)

3

Call the LANL EOSC at 505-667-6211

notice (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Emergency Reporting

Workers must immediately report an emergency as soon as it is safe to do so. Initial emergency reporting must be made promptly, accurately, and effectively by an on-scene

Talk to your supervisor about what to do in an emergency; ask questions to ensure you fully understand.

X I UNDERSTAND

3

Call the LANL EOSC at 505-667-6211

1.20 Evacuation

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Notifications

If you forward your pager to your cell phone, then you will only receive a truncated message which may be difficult to read and understand. If this happens, you will call the EOSC at 505-667-6211.

In the event that the mass notification system cannot be used, the EOSC will issue notifications using alternative methods such as LANL-All emails, posting information on the LANL homepage, and/or directly calling affected facilities and operations centers.

notice (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Notifications

If you forward your pager to your cell phone, then you will only receive a truncated message which may be difficult to read and understand. If this happens, you will call the EOSC at

Talk to your supervisor about what to do
in an emergency; ask questions to ensure
you fully understand.

X I UNDERSTAND

1.21 Protective actions

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Protective Actions

As we mentioned, there are four general protective actions you can take in an emergency: evacuate, shelter in place, remain indoors, and lockdown. Detailed information about protective actions is available in institutional procedure P1201-4, *Incident Reporting and Protective Actions*.

Click on each section to learn more.



EVACUATE



REMAIN INDOORS



SHELTER-IN-PLACE



LOCKDOWN

evacuate (Slide Layer)



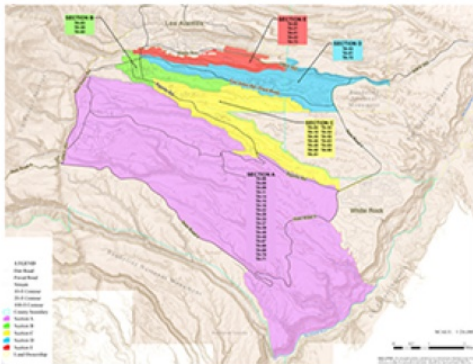
EVACUATE



Building Evacuations

Building occupants may need to evacuate in the event of a chemical spill, fire, suspicious package/bomb threat, or other emergency. Once evacuated, personnel need to assemble at their designated assembly area for accountability. If necessary, alternate assembly areas will be identified when the building evacuation is issued and should be located uphill and upwind from the emergency event.

Notifications of additional protective actions and the release to return to your building will be announced at the assembly area by the assembly area leader.



Site Evacuation

Depending on the type and urgency of the emergency, the decision may be made to evacuate the entire site or certain pre-identified sections using specific routes. Pre-determined site evacuation routes are used whenever possible.

A site-wide evacuation may be communicated via the mass notification system and through site communications such as emails and information posted to the LANL homepage.

indoors (Slide Layer)



REMAIN INDOORS



Remain indoors is primarily used as a precautionary action to protect workers for non-hazardous materials release incidents when it is safer inside than outside (e.g. severe weather conditions, structure fire in nearby facility).

Your Responsibilities when Remaining Indoors

When directed to remain indoors, stay or move indoors, and follow these guidelines:

- Remain alert for follow-on communications or directions.
- Follow instructions provided by the EOSC, Incident Commander (IC), and/or the applicable local facility-level Operations Center.
- You are free to move around inside the facility and you do NOT have to report in for accountability.

viewmore (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory EMERGENCY PREPAREDNESS

Protective Actions

As we mentioned, there are four general protective actions you can take in an emergency: evacuate, shelter in place, remain indoors, and lockdown. Detailed information about protective actions is available in institutional procedure P1201-4, *Incident Reporting and*

You may not proceed to the next slide until you have viewed all of the content on this slide. Please return and finish viewing all of the content.

RETURN



SHELTER-IN-PLACE



LOCKDOWN

shelter (Slide Layer)



SHELTER-IN-PLACE




Workers may need to SIP when it is safer inside than outside primarily due to an actual or potential airborne HAZMAT release (e.g. chemical, biological, or radiological release).

Responsibilities During a Building Evacuation


Upon the notification to evacuate (e.g., an alarm or verbal notification), using the nearest safe exit route. During evacuation, include the following:

- If accessible and safe to do so, take personal possessions (e.g. medications, coat, handbag/briefcase, and vehicle keys) in case you are not allowed to re-enter the building.
- Do not carry food, drinks, or items that, if dropped, could inhibit safe egress or cause slips, trips, or falls
- Conduct a visual sweep along the evacuation route. If safe to do so, looking for anything that may assist with the timely rescue of workers or identify the source of the emergency.
- Do NOT use elevators.
- Alert workers and visitors who may not be aware of the need to evacuate.
- Be aware of and give the right of way to responding emergency vehicles and personnel.
- Report to the designated assembly area for accountability.
- Provide your name and Z number to the Leader, relay information obtained during your

lockdown (Slide Layer)



LOCKDOWN



Lockdown is a universal term that is used to encompass the protective actions that can be taken when there is an active threat situation (e.g. malevolent act, active shooter, workplace violence).

Your Responsibilities During Lockdown

The location of the threat as well as our personal experience, training, and judgement will influence the decision of what initial protective action to take. The three protective actions to consider in order are evacuate (run), self-barricade (hide), and take action (fight).

You must quickly determine the most reasonable way to protect your own life. Choices include:

- RUN
- HIDE
- FIGHT

- Call 911 as soon as it is safe to do so, then call EOSC at (505) 667-6211 so that protective actions can be provided to the facility and rest of the Laboratory. Provide location of the active threat, number of individuals and physical description, number and type of weapons, and number of potential victims.

When protective force or law enforcement arrive, follow their directions, put down any items in your hands, keep hands raised, avoid quick movements toward officers, and do not stop officers with

1.22 Learn More

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Protective Actions Overview

The preceding overview was just a taste of what there is to know about actions to take during emergencies at the Los Alamos National Laboratory. You'll learn much more about the Laboratory's emergency plans and procedures by taking required Course 10992, *Incident Reporting and Protective Actions*. Complete this training as soon as possible to ensure that you know how to safely respond to an emergency. While at LANL, you will also participate in drills and exercises which allow you to practice receiving notifications and taking protective actions during a simulated emergency.

You should also talk with your supervisor about any facility-specific emergency plans and procedures where you will be working. Read and become familiar with any emergency plans, procedures, and diagrams for your facility.

notice (Slide Layer)

GENERAL EMPLOYEE TRAINING: About Los Alamos National Laboratory

EMERGENCY PREPAREDNESS

Protective Actions Overview

The preceding overview was just a taste of what there is to know about actions to take during emergencies at the Los Alamos National Laboratory. You'll learn much more about the

Talk to your supervisor about what to do in an emergency; ask questions to ensure you fully understand.

✕

I UNDERSTAND

1.23 What Lies Ahead

GENERAL EMPLOYEE TRAINING: [About Los Alamos National Laboratory](#)

You have come to the end of
this module.

Click the “Next” button to return to
the course menu.

2. Work Safely

2.1 GENERAL EMPLOYEE TRAINING



Self-Study #43094

GENERAL EMPLOYEE TRAINING
Module 2: Working Safely

The next slide contains audio, please make sure the volume is turned up.

2.2 Objectives

GENERAL EMPLOYEE TRAINING: **Working Safely**

OBJECTIVES

In This Section

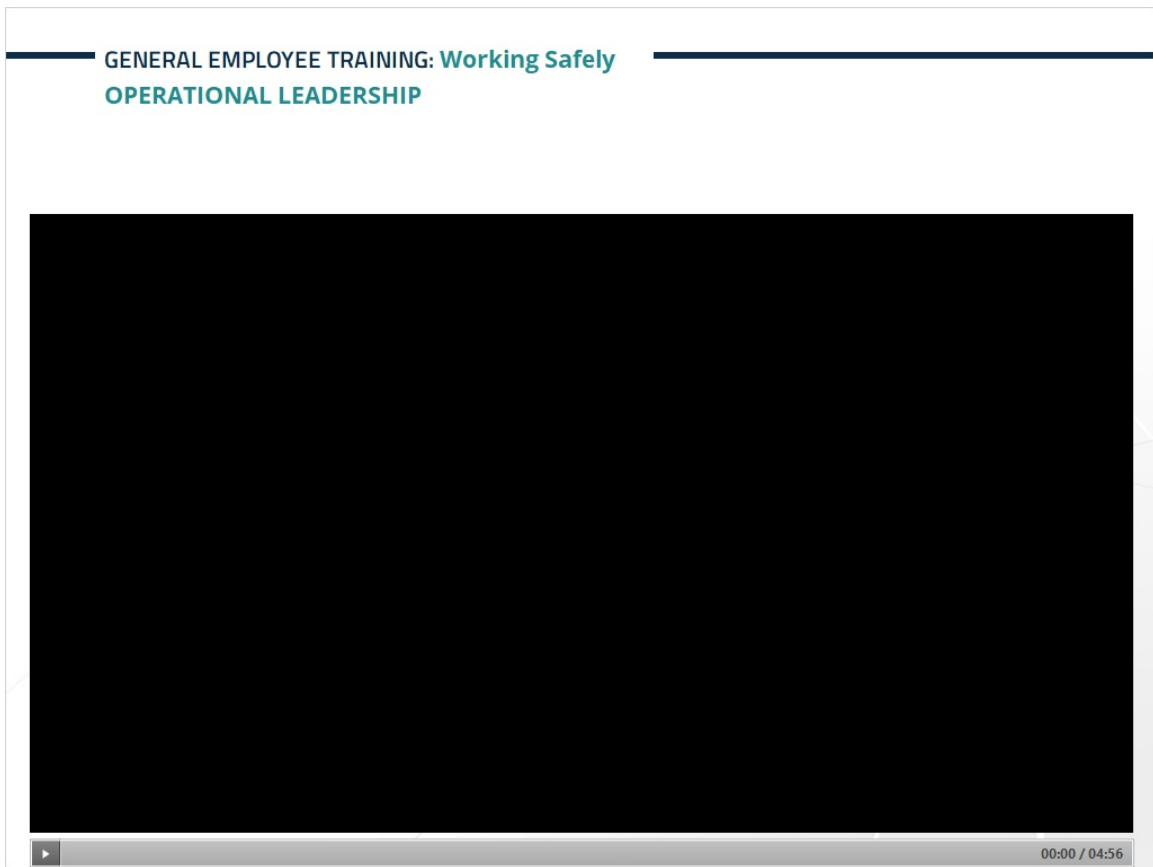
By using this section, you will recognize LANL's safety requirements. For the purposes of this section, the term "safety" means "environment, safety, health, security, and quality."

What You Will Learn

When you have completed this section, you will:

1. Understand how to work safely at the Laboratory
2. Identify the requirement to pause and stop work when an activity presents a safety concern
3. Demonstrate how to report safety and security concerns
4. Understand your rights and responsibilities regarding safety and health
5. Identify types of workplace hazards and their potential impact on worker safety
6. Recognize unsafe work practices and hazards
7. Recognize your responsibilities during a fire
8. Understand the purpose of lockout/tagout and your lockout/tagout responsibilities

2.3 Safety Policies and Values



2.4 Safety Policies and Values

GENERAL EMPLOYEE TRAINING: Working Safely AT THE LABORATORY WE:	
Conduct work safely and responsibly	Ensure a safe and healthful work environment for workers, contractors, visitors, and other onsite personnel
Protect the health, safety, and welfare of the general public	Do not compromise safety for personal, programmatic, or operational reasons
Operate, manage, and maintain the facilities and infrastructure	Manage our facilities to perform work safely and securely, support a healthful and positive working environment, and protect the nation's investment
Protect the property, equipment, and facilities from damage or loss resulting from accidents or improper working conditions	

2.5 ISM

GENERAL EMPLOYEE TRAINING: **Working Safely**
INTEGRATED SAFETY MANAGEMENT (ISM)

ISM is a Laboratory program that integrates all facets of our work environment into a **cohesive program** that combines



REQUIREMENTS

The core function and guiding principle of ISM is the overarching framework that the Laboratory uses to manage the conduct of work under the Laboratory's operating contract. ISM applies to anyone working at the Laboratory, including LANS employees, contractors, subcontractors, and visitors.

2.6 ISM Program

GENERAL EMPLOYEE TRAINING: **Working Safely**

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:



Define (Slide Layer)

GENERAL EMPLOYEE TRAINING: *Working Safely*

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:

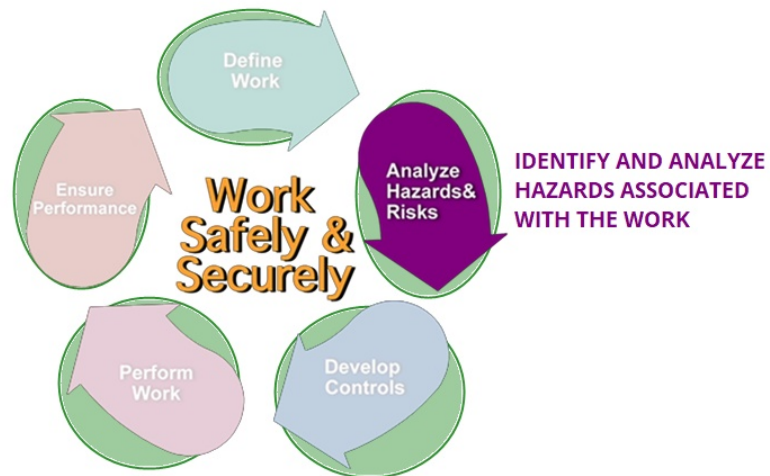


Analyze (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:



Develop (Slide Layer)

GENERAL EMPLOYEE TRAINING: *Working Safely*

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:



Perform (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:

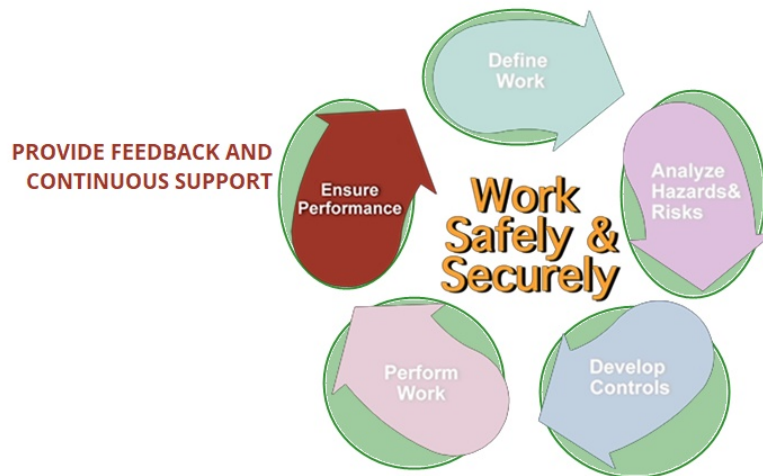


Ensure (Slide Layer)

GENERAL EMPLOYEE TRAINING: *Working Safely*

INTEGRATED SAFETY MANAGEMENT

The ISM Program describes the specific work activities that must be accomplished and is organized around the following five core functions:



2.7 Work Management

GENERAL EMPLOYEE TRAINING: **Working Safely** **LABORATORY-WIDE SAFETY REQUIREMENTS**

All work, programmatic and non-programmatic, within any facility falls within a work management process that considers hazards and safety and security requirements. For your own safety and that of others, make sure you are familiar with work processes within your facility.



FOR EXAMPLE:

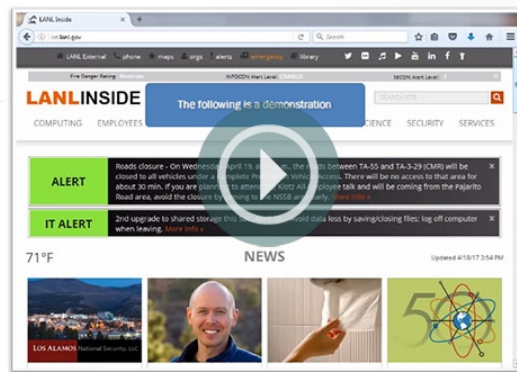
If a circuit breaker trips, do not reset it yourself unless you are a qualified electrician. You must report it to your building manager or facility coordinator.

2.8 Policy Page

GENERAL EMPLOYEE TRAINING: **Working Safely** **LABORATORY-WIDE SAFETY REQUIREMENTS**

Safety requirements are established for the entire Laboratory, for each facility, and for all work activities. To guide you in the process, a series of functional documents and local instructions define processes, operations, or other information needed to perform certain work.

Laboratory-wide safety requirements are found in institutional documents, which include system descriptions, program descriptions, and procedures.



This video contains audio, please make sure the volume is turned up.

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GENERAL EMPLOYEE TRAINING: **Working Safely** **LABORATORY-WIDE SAFETY REQUIREMENTS**

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Laboratory-wide safety requirements are found in institutional documents, which include system descriptions, program descriptions, and procedures.



This video contains audio, please make sure the volume is turned up.

2.9 Responsibilities



workers (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

RESPONSIBILITIES

LANL workers must not perform work unless it has been approved by their responsible line manager (RLM) and facility operations director (FOD) and they are confident that the work can be done safely. LANL workers must:

-  maintain required training and qualification to perform the work
-  perform work in a safe, secure, and environmentally responsible manner and in accordance with any requirements contained in the IWD
-  use lessons learned from any control failures, near misses, or incidents to make improvements
-  check frequently to ensure that controls are functioning and are effective in regulating the risks

MANAGERS



WORKERS

Slide to compare responsibilities

managers (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

RESPONSIBILITIES

LANL managers have the following responsibilities:

-  approve the activity-specific part of the integrated work document (IWD) based on evaluating the adequacy of controls
-  determine the competence and commitment of workers to perform specific work assignments in a safe, secure, and environmentally responsible manner, and authorize them as appropriate
-  monitor work to ensure that it is executed in a safe, secure, and environmentally responsible manner in accordance with the IWD

MANAGERS



WORKERS

Slide to compare responsibilities

2.10 Pause and Stop

GENERAL EMPLOYEE TRAINING: *Working Safely*

PAUSE AND STOP WORK AUTHORITY

YOU

YOU

You have the **AUTHORITY** and **RESPONSIBILITY** to pause and/or stop work when an activity presents an immediate or potential safety concern.

Work **MUST NOT** resume until the concern is resolved.

The Laboratory's procedure for Pause/Stop Work, P101-18, contains requirements for all workers. The actions taken are based on the degree of hazard classification and risk to health, security, safety, and/or the environment.



PAUSE WORK

STOP WORK

RETALIATION

2.11 Pause and Stop

GENERAL EMPLOYEE TRAINING: **Working Safely**

PAUSE AND STOP WORK AUTHORITY

YOU

PAUSE WORK

PAUSING WORK

In general, if you observe an unsafe condition or act that may pose an imminent danger or other safety or security concern/hazard, you need to inform all workers and the manager engaged in that work and request that the work activity be paused and/or stopped.

For work that is paused as a result of a safety concern that can be resolved immediately and to the mutual satisfaction of the workers involved, no reporting or further action is required.

STOP WORK

RETALIATION

2.12 Pause and Stop

GENERAL EMPLOYEE TRAINING: **Working Safely**

PAUSE AND STOP WORK AUTHORITY

YOU

PAUSE WORK

STOP WORK

STOPPING WORK

If the condition is determined to be **NOT** readily fixable, contact the RLM/designee for the job as soon as possible, declare an official Stop Work, and proceed with the Stop Work requirements of the Procedure for Pause/Stop Work, P101-18.

RETALIATION

2.13 Pause and Stop

GENERAL EMPLOYEE TRAINING: **Working Safely**

PAUSE AND STOP WORK AUTHORITY

YOU

PAUSE WORK

STOP WORK

RETALIATION

RETALIATION

RETALIATION FOR STOPPING WORK IS PROHIBITED

The Laboratory prohibits retaliation against workers for stopping work for safety reasons. Any form of retaliation should be reported by the following means:

If you are a Laboratory employee, report such retaliation to your supervisor or manager, call the Laboratory's Employee Concerns Program, or send an e-mail to ecp@lanl.gov.

If you are a contract worker, report such retaliation to your employer, call the Employee Concerns Program, or send an e-mail to ecp@lanl.gov.

If your complaint of retaliation is not resolved by the Laboratory or its contractor, you can always call the DOE/NNSA Employee Concerns Hotline.

2.14 Reporting

GENERAL EMPLOYEE TRAINING: *Working Safely* REPORTING SAFETY AND SECURITY CONCERNS

You may encounter safety concerns in your work area that are either unrelated to a work activity or do not pose an immediate concern. It is important to report these concerns so that they can be addressed. You do not have to give your name when reporting a safety or security concern. You are also protected from reprisal for reporting a problem.

To report a safety or security concern, you have several options:



- ☐ Notify your supervisor
- ☐ Call the Safety Help Desk or send an e-mail: safety@lanl.gov
- ☐ Call the Employee Concerns Program or send an e-mail: ecp@lanl.gov
- ☐ Call the Security Help Line
- ☐ Contact your Deployed Security Officer
- ☐ Contact your Worker Safety and Security Team (WSST) representative

2.15 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by DOE 10 CFR 851. Worker's rights:

DECLINE TO PERFORM TASKS

DECLINE TO PERFORM TASKS

Workers have the right to decline to perform tasks that they believe will endanger their lives and/or threaten their physical well-being. More specifically, if the worker does not have sufficient time to partake in the prescribed hazard reporting/abatement procedures, then the worker can simply decline to partake in the allegedly hazardous activity.

ACCESS TO PUBLICATIONS

CEASE WORK

GET A REPRESENTATIVE

OBSERVE

NOTIFICATION OF EXPOSURE

SEE INSPECTIONS

EXPRESS CONCERNS

2.16 Workers' Rights

GENERAL EMPLOYEE TRAINING: *Working Safely*

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:

DECLINE TO PERFORM TASKS

ACCESS TO PUBLICATIONS

ACCESS TO PUBLICATIONS

Workers have the right to access DOE safety publications and guidelines, the worker safety and health program, the standards/procedures applicable to the workplace, the safety and health posters that inform workers, and any other pertinent information that addresses employee health and safety.

CEASE WORK

GET A REPRESENTATIVE

OBSERVE

NOTIFICATION OF EXPOSURE

SEE INSPECTIONS

EXPRESS CONCERNS

2.17 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:

DECLINE TO PERFORM TASKS

ACCESS TO PUBLICATIONS

CEASE WORK

CEASE WORK

Workers have the right to cease work upon discovering that work is exposing them to hazardous conditions. This cessation of work must be done in accordance with the procedures established in the worker safety and health program.

GET A REPRESENTATIVE

OBSERVE

NOTIFICATION OF EXPOSURE

SEE INSPECTIONS

EXPRESS CONCERNS

2.18 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:

DECLINE TO PERFORM TASKS

ACCESS TO PUBLICATIONS

CEASE WORK

GET A REPRESENTATIVE

GET A REPRESENTATIVE

Workers have the right to mandate that an employee representative be present to observe/assist in workplace investigations.

OBSERVE

NOTIFICATION OF EXPOSURE

SEE INSPECTIONS

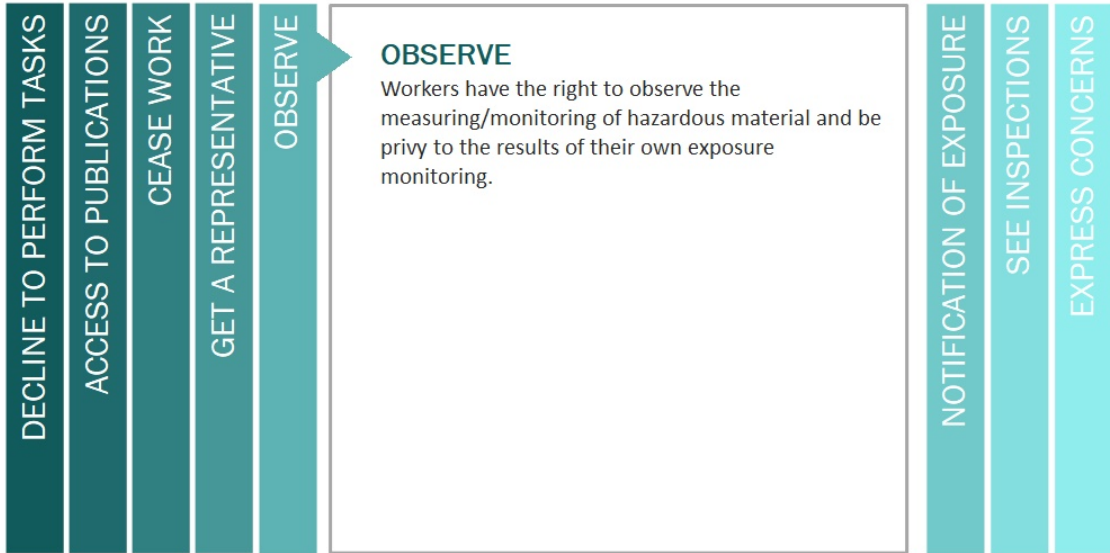
EXPRESS CONCERNS

2.19 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

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2.20 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:

DECLINE TO PERFORM TASKS

ACCESS TO PUBLICATIONS

CEASE WORK

GET A REPRESENTATIVE

OBSERVE

NOTIFICATION OF EXPOSURE

NOTIFICATION OF EXPOSURE

Workers have the right to be notified when it becomes known that workers were over-exposed to hazardous material.

SEE INSPECTIONS

EXPRESS CONCERNS

2.21 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:



2.22 Workers' Rights

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER'S RIGHTS UNDER DOE 10 CFR 851

Laboratory workers also have certain rights afforded by federal regulation DOE 10 CFR 851. Worker's rights:



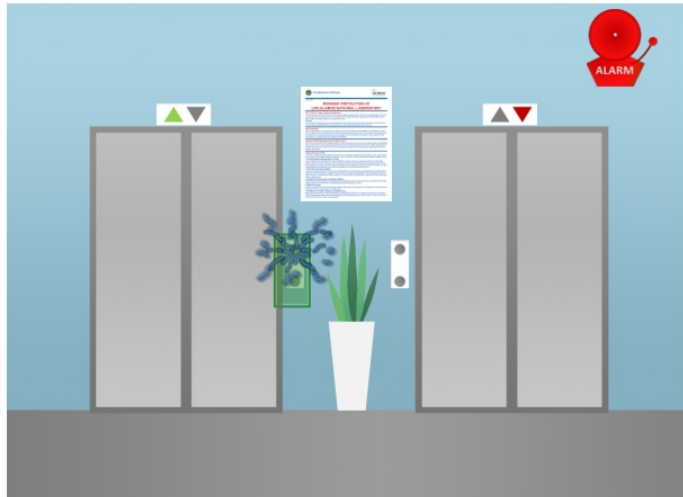
2.23 Workers' Responsibilities

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKERS' RESPONSIBILITIES

Workers also have responsibilities to comply with all mandates listed in the Laboratory's worker safety and health program. As a Laboratory worker, you must

(find the five worker responsibilities by hovering your mouse over each element)



1. Report hazardous conditions to your supervisor promptly
2. Perform all work safely
3. Stop work if you believe an activity is hazardous to workers or the environment

4. Respond to emergency signals, and report emergencies immediately

- 5) Comply with Worker Safety and Health requirements of the 851 Rule

For detailed information about the materials with which you work, consult the safety data sheets (SDSs) available in your work area.

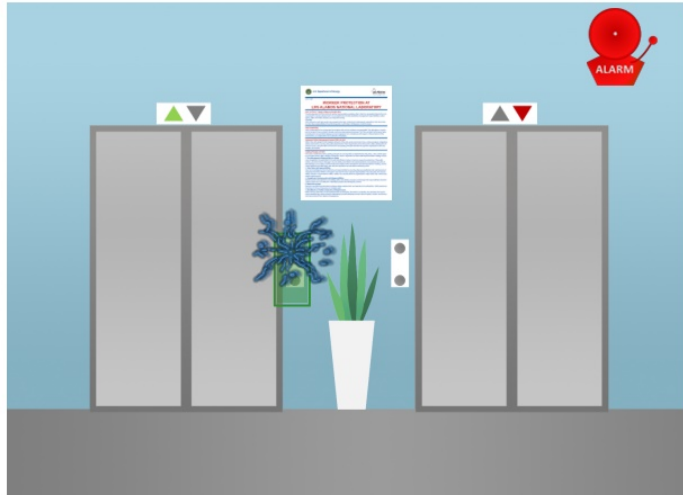
sparks (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

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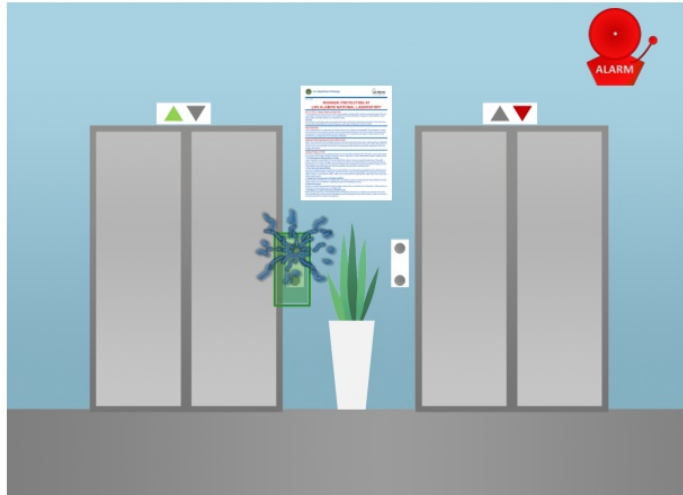
alarm (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

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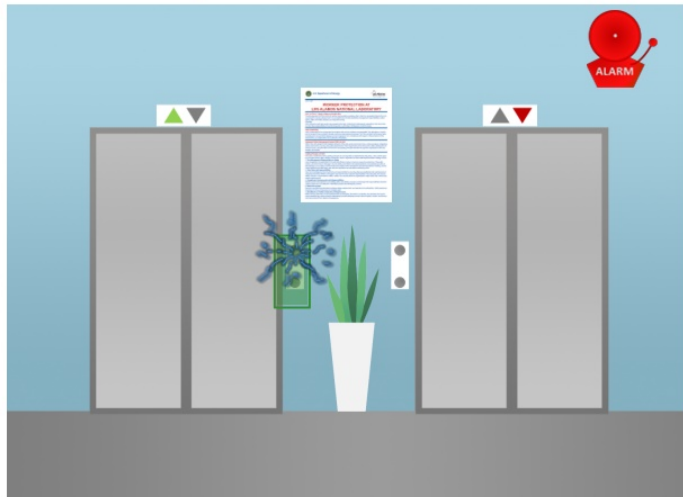
851 (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

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For detailed information about the materials with which you work, consult the safety data sheets (SDSs) available in your work area.

2.24 Lab's Responsibility

GENERAL EMPLOYEE TRAINING: **Working Safely**

DOE 10 CFR 851, "Worker Safety and Health Rule"



Under DOE 10 CFR 851, LANL and subcontractor management have the responsibility to:



2.25 Employment WSST Involvement

GENERAL EMPLOYEE TRAINING: **Working Safely**

WORKER ENVIRONMENTAL SAFETY AND SECURITY TEAM (WSST)

The mission of the Worker Environmental Safety and Security Team is to improve safety and security at the Laboratory through the direct involvement of all people performing work on behalf of LANL.

The DOE Voluntary Protection Program (DOE-VPP) is widely recognized across the DOE Complex for promoting excellence in occupational safety and worker health. The key to the DOE-VPP is worker involvement.

There are more than 100 LANL WSSTs established at appropriate organizational levels (Institutional, Associate Directorate, Division, and/or Group) to ensure that all workers are represented.

You are encouraged to meet your WSST representative and participate in improving safety and security. You can also discuss environmental issues, concerns, and considerations at the Laboratory with your WSST representative.



2.26 Hazards in the Workplace

GENERAL EMPLOYEE TRAINING: **Working Safely**

TYPES OF HAZARDS

Observation and judgment, combined with objective scientific measurements, are used to determine the quality and quantity of a hazard. Be aware that the hazard may not give clear signs that you can sense.

Make sure you are aware of the health hazards in your work area and activities and what controls are in place to mitigate those hazards. If you have any questions or concerns about your work, contact your supervisor.



FOR EXAMPLE:


Your senses cannot detect an odorless, clear gas or vapor and cannot determine if the rigging on a crane can carry the weight of a load.

2.27 Health Hazards

GENERAL EMPLOYEE TRAINING: **Working Safely**

HEALTH HAZARDS

(find the 4 types of health hazards to which you could be exposed in the workplace)



The illustration shows a laboratory or office workspace. On the left, a yellow lab coat hangs on a rack. In the center, a desk holds a computer monitor, a laptop, and a red desk lamp. A yellow sign with a radiation symbol and the word "NOTICE" is on the desk. Behind the desk is a window showing a landscape with trees. To the right, a dark brown shelving unit holds various items: a beaker with a biohazard symbol, several beakers with colored liquids, a mouse, and a red box. A pink horizontal bar is at the bottom of the illustration.

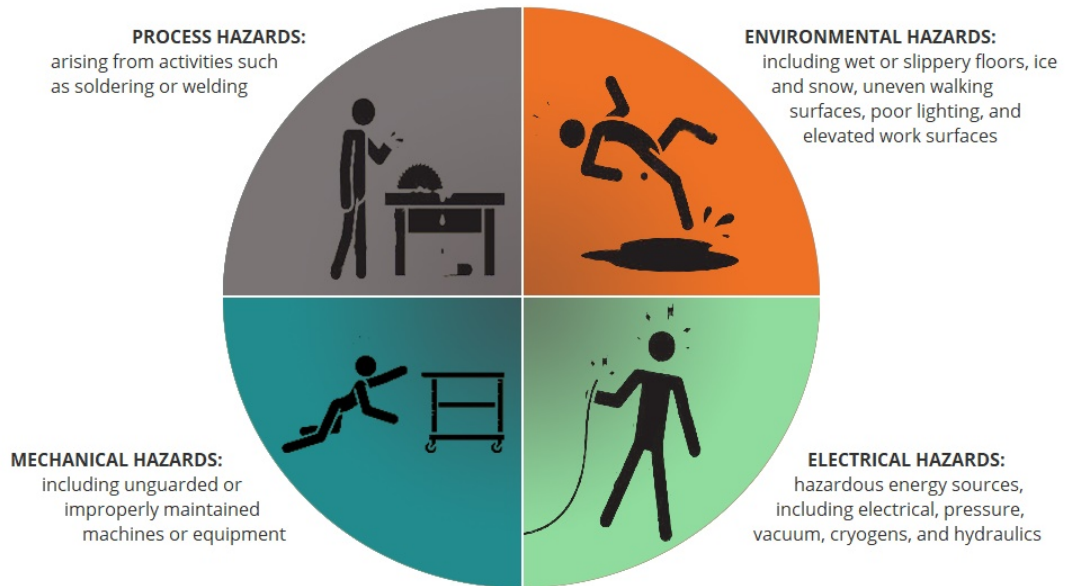
- 1) chemical hazards:
such as inhaled gas,
explosive chemicals,
solvents, gasoline,
oils, and acids
- 2) biological hazards:
rodents, insects,
molds, bacteria,
yeasts, and viruses
[such as hepatitis B
virus (HBV), HIV, and
hantavirus]
- 3) ergonomic factors:
repetitive motion and
improper posture
when lifting or
handling materials
- 4) others, including
thermal and
radiological hazards

2.28 Physical Hazards

GENERAL EMPLOYEE TRAINING: *Working Safely*

PHYSICAL HAZARDS

There are 4 types of physical hazards that you might encounter in the workplace



2.29 Unsafe Work Practices

GENERAL EMPLOYEE TRAINING: *Working Safely*

UNSAFE WORK PRACTICES

The following are examples of unsafe work practices that could lead to accidents, injuries, and illnesses:



Improper use of equipment



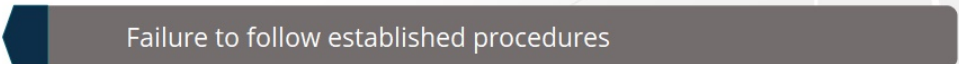
Use of equipment without required training



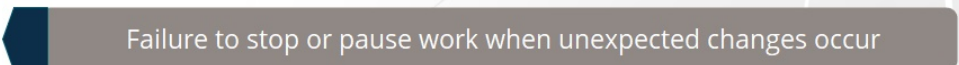
Use of improperly maintained equipment



Failure to use required personal protective equipment (PPE)

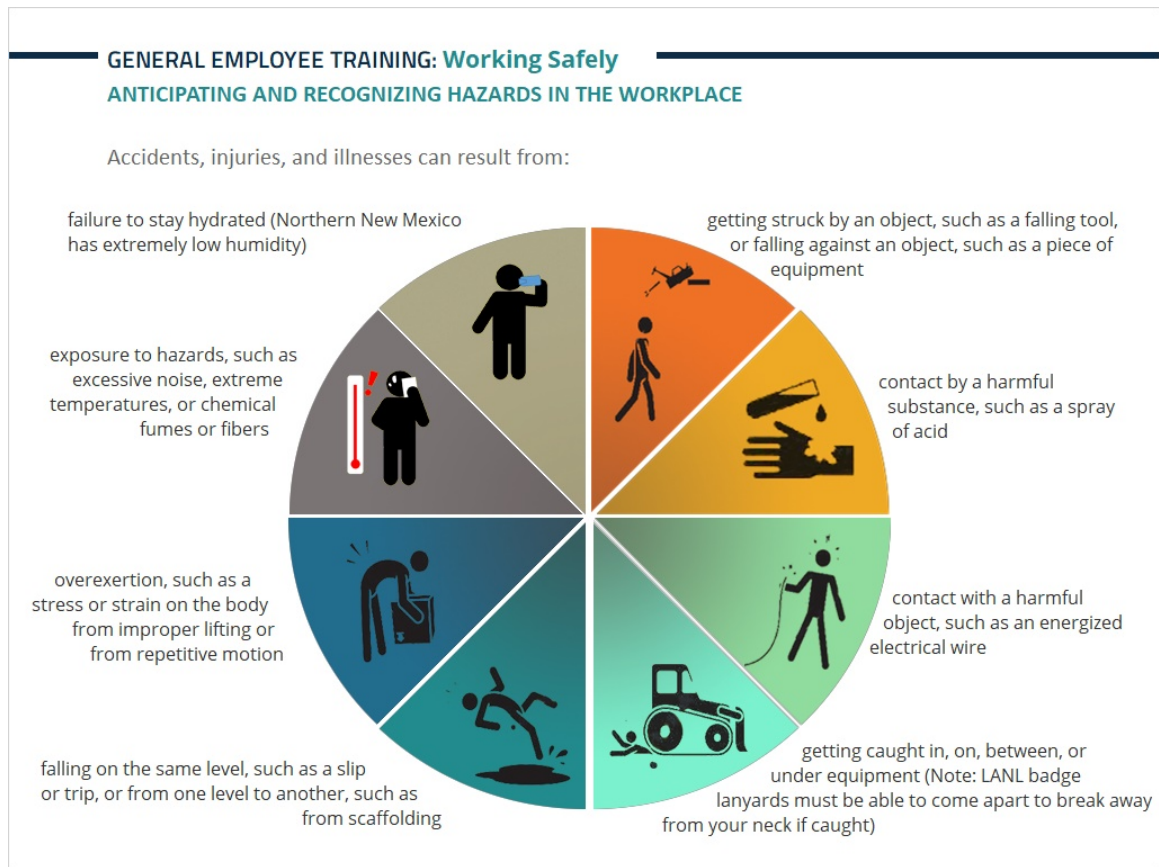


Failure to follow established procedures



Failure to stop or pause work when unexpected changes occur

2.30 Accidents, Injuries, and Illnesses

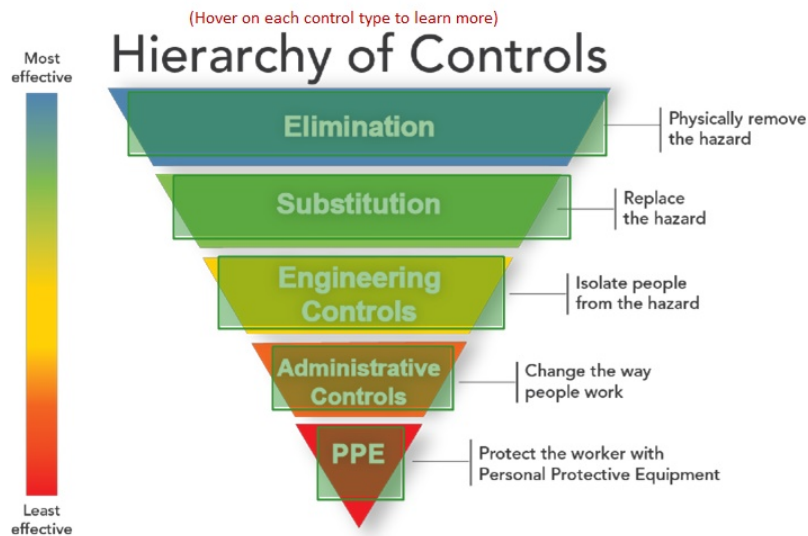


2.31 Controlling Hazards

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.

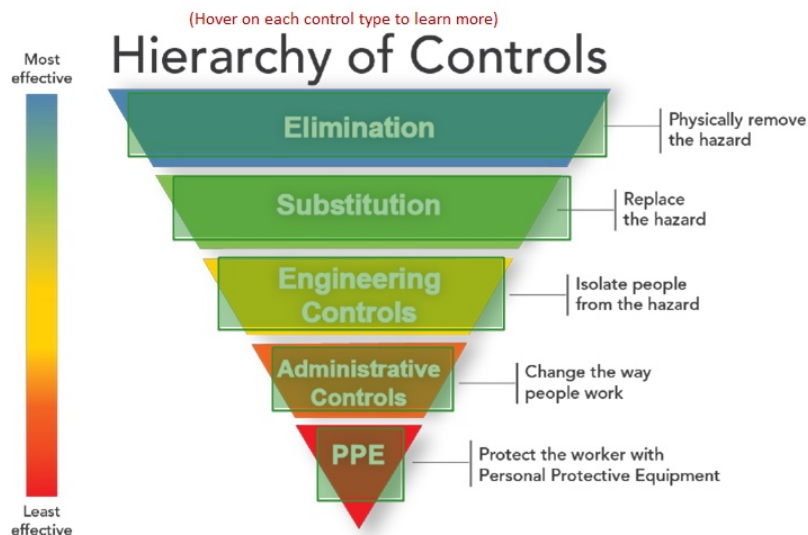


PPE (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.



PERSONAL PROTECTION EQUIPMENT (PPE)

PPE is the least preferred method of control and should be used only to supplement other control methods. Some examples of PPE are:

- protective clothing (lab coats, coveralls, gloves, hardhats, and safety shoes)
- protective eye wear (safety glasses and goggles)
- hearing protection and respirators

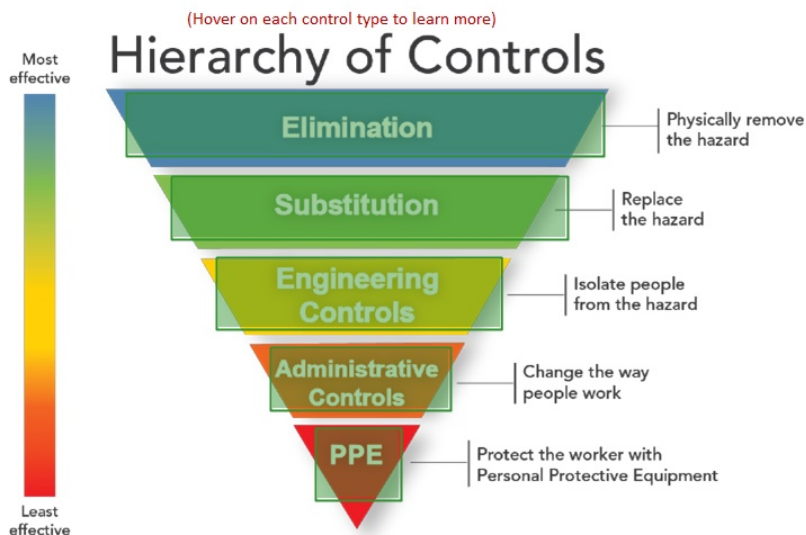
PPE required for your work will be provided. Do not bring personally obtained PPE, or that which may have been provided by a previous employer to use at the Laboratory.

ADMIN (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.



ADMINISTRATIVE CONTROLS

Administrative controls are requirements established to minimize hazards. Some examples are:

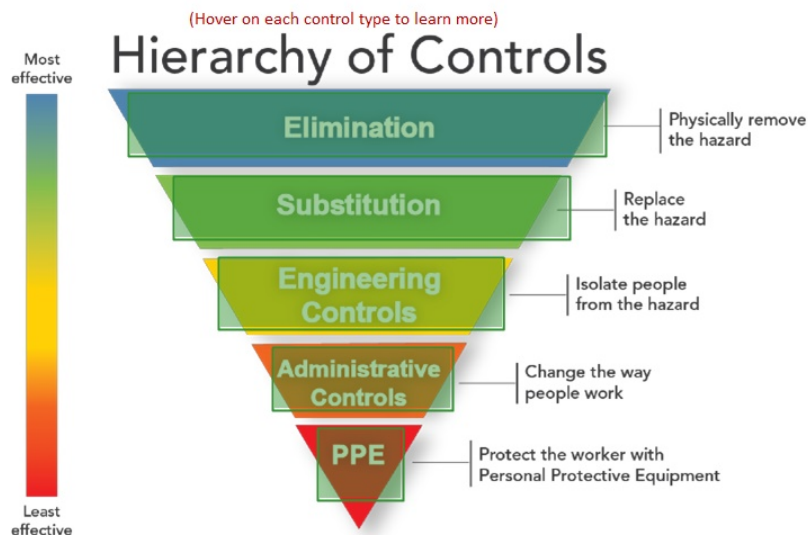
- integrated work documents
- limits on exposure time
- signs and postings
- training
- access controls

ENGINEERING (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.



ENGINEERING CONTROLS

Engineering controls are mechanical or structural systems used to reduce or minimize hazards. Examples include:

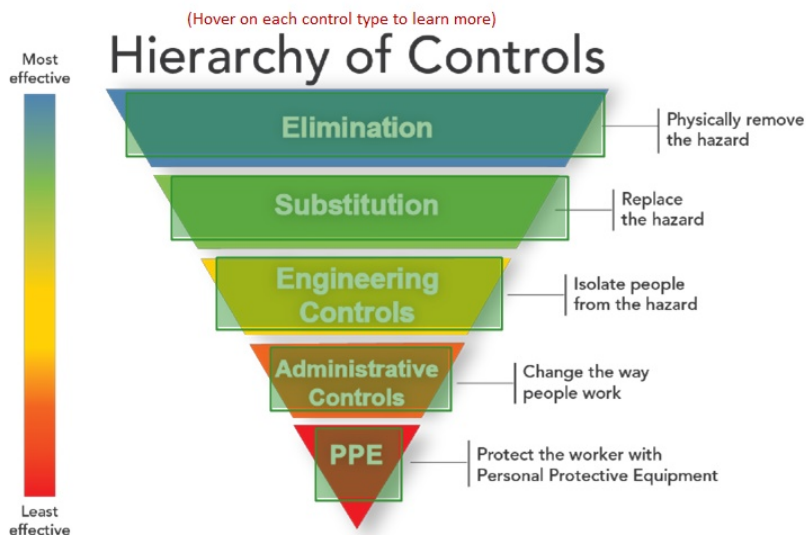
- fume hoods/glove boxes
- interlocks
- shielding
- pressure vessels
- HEPA filters

SUB (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.



SUBSTITUTION

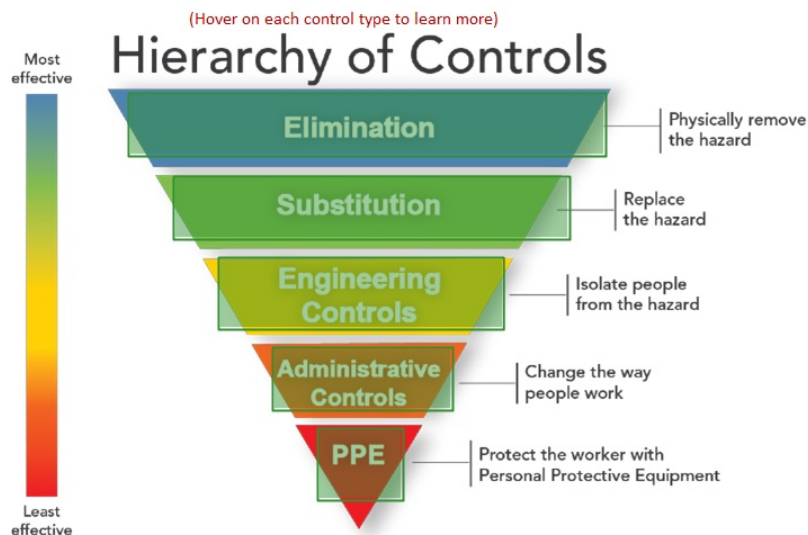
Substitution is the replacement of a hazardous material or process with a less hazardous material or process.

ELIMINATION (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Safely

CONTROLLING HAZARDS IN THE WORKPLACE

Note that this is a hierarchy that should be used to make decisions about hazards. For instance, if elimination (Principle 1) isn't possible, then you should proceed to attempt substitution (Principle 2) by replacing a hazardous material or process with a less hazardous material or process. If substitution isn't possible, then you should proceed to complete your task with appropriate engineering controls (Principle 3), etc.



ELIMINATION

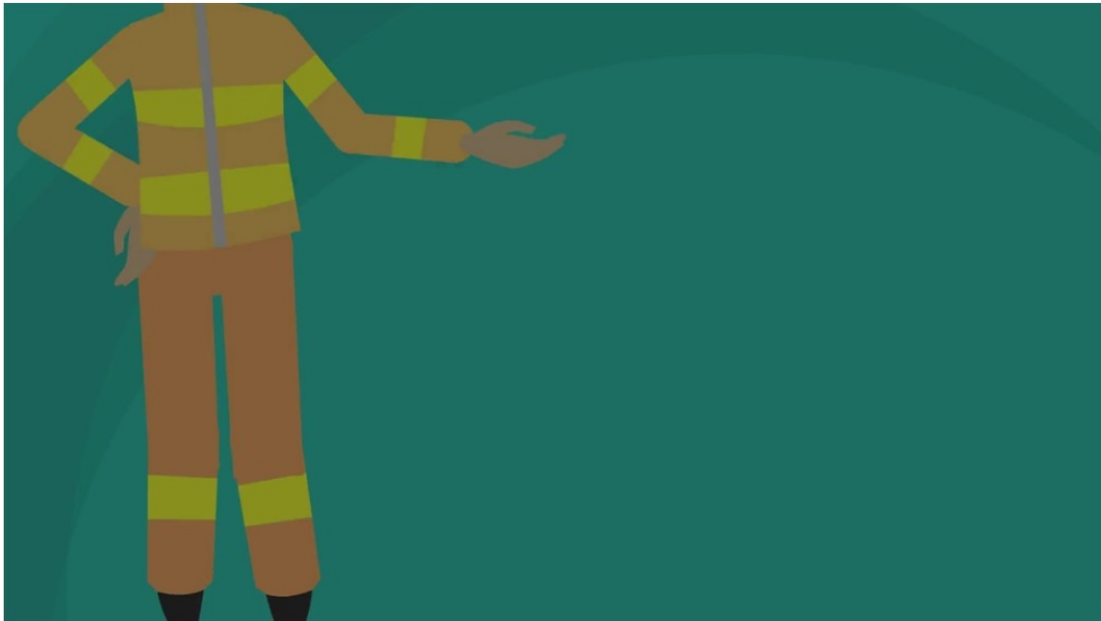
Elimination is the removal of a hazard from the operation.

2.32 Fire Safety

GENERAL EMPLOYEE TRAINING: *Working Safely*

FIRE PROTECTION

Fire is the third leading cause of accidental death in the US. More than 70 workplace fires occur every day, yet most people fail to prepare for the possibility of a life-threatening fire.



2.33 Fire Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

FIRE PROTECTION Recap

While fire hazards exist in any workplace, knowing the information in this subsection will help you avoid injury in the event of a fire at your worksite. Remember, your first responsibility is to protect **yourself**.

Steps to follow during a fire

1. Pull the manual fire alarm.
2. Call 911 (provide your TA and building numbers).
3. Evacuate the building and report to your assembly area.
4. Leave your office in a safe configuration.

2.34 Electrical Safety

GENERAL EMPLOYEE TRAINING: *Working Safely*

ELECTRICAL HAZARDS

Electricity is an invisible omnipresent hazard. Electrical hazards are present in high-voltage power lines as well as in office equipment such as printers, copiers, shredders, all the way down to battery operated equipment, such as your cell phone. When you work around electrical equipment, heed the following precautions:

DO

TURN OFF equipment before disconnecting it and before attempting to work with it or remove a jam.

DISCONNECT equipment by pulling the plug, not the cord.

USE manufacturer recommended plugs and cords only.

INSPECT the condition of electrical equipment proper to using for defects or damage.

DO NOT

DO NOT ASSUME that any energy source is too small to hurt you.

DO NOT ASSUME that equipment is turned off.

DO NOT PLUG one extension cord into another or use them in place of permanent wiring. Only one extension cord is permitted between a receptacle outlet and an electrical appliance.

DO NOT OPERATE a circuit breaker unless you are trained as an electrical worker at LANL.

DO NOT PLUG in high current loads into a multi-outlet strip (e.g. space heaters, toasters, coffee pots, microwaves)

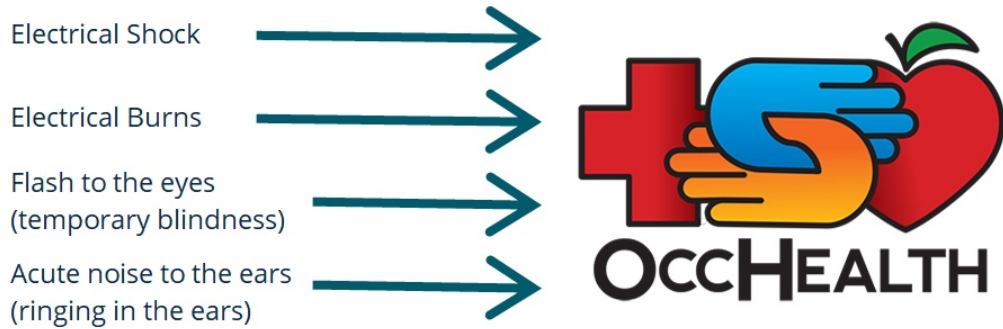
2.35 Electrical Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

ELECTRICAL HAZARDS

If shocked, workers must be evaluated by Occupational Health (TA03-1411) immediately. For emergencies, call 911.

Examples of electrical injuries include:



For emergencies call 9-1-1.

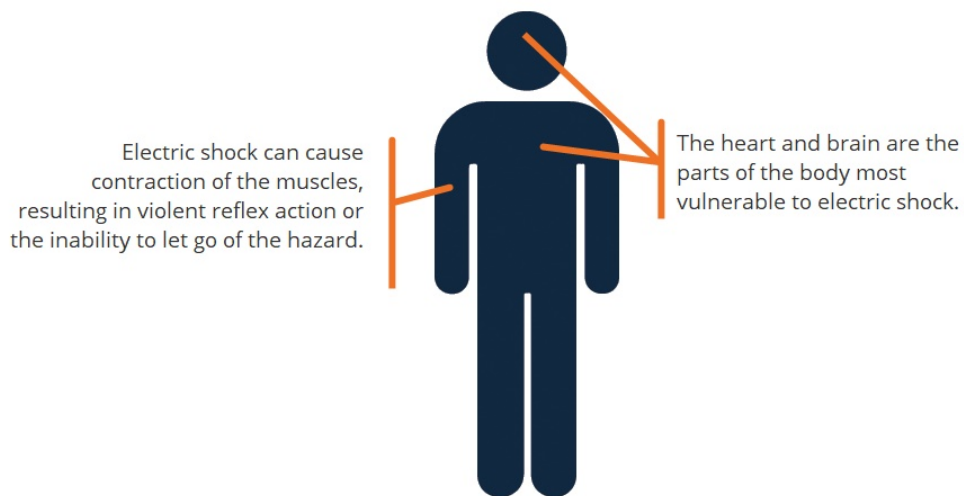
2.36 Electrical Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

ELECTRICAL HAZARDS

Shock Injury from Electricity

Shock is the flow of electrical current through any portion of the body from an external electrical source. Accidents can occur in which contact with electricity results in serious injury or death.



2.37 Electrical Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

ELECTRICAL HAZARDS

Burn Injury from Electricity

Burns suffered in electrical accidents are of three basic types: electrical burns, arc-flash burns, and thermal contact burns.

Electrical Burns

Tissue damage (whether skin-deep or deeper) occurs because the body is unable to dissipate the heat from the current flow through the body.

Arc-flash Burns

Temperatures generated by electric arcs can melt nearby material, vaporize metal in close vicinity, cause heat burns, and ignite clothing.

Thermal Contact Burns

Occur when skin comes into contact with the hot surfaces of overheated electric conductors, including conductive tools and jewelry (e.g. shorting out a car battery with a wrench).

2.38 Electrical Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

ELECTRICAL HAZARDS

When using electrical equipment, a worker is protected primarily by engineering controls (i.e. design features) that prevent the worker from being exposed to a hazard. To prevent injuries like the ones listed above, ensure that the plug and cord powered by the facility has the Nationally Recognized Testing Laboratory (NRTL) certification marking.



Note: A CE symbol is not an NRTL.

2.39 Electrical Safety

GENERAL EMPLOYEE TRAINING: **Working Safely**

ELECTRICAL HAZARDS

Know Your Electrical Safety Officer (ESO)

Electric Safety Officers serve as the primary focal point for electrical safety within your organization. ESOs inspect and improve electrical equipment, perform walk-throughs of work areas, and ensure electrical workers are qualified. In addition, they consult, assist, and facilitate safe electrical work and review and approve electrical Integrated Work Documents (IWDs) and other work control documents. Become familiar with your ESO by visiting esc.lanl.gov or the online building locator system.

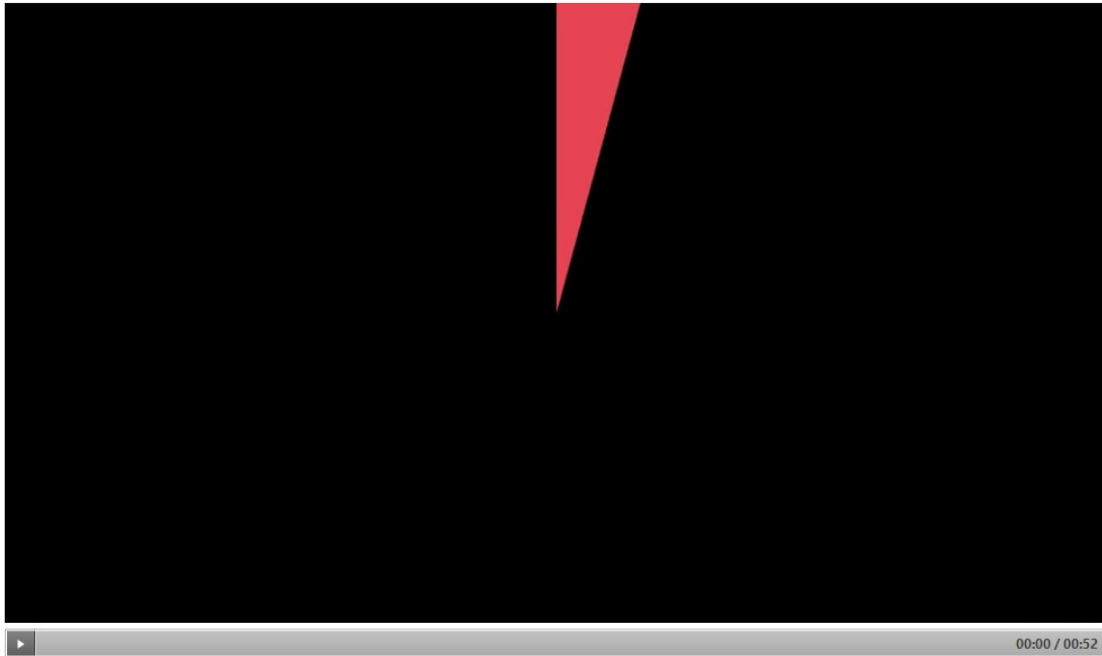


2.40 Lockout/Tagout Program

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

In addition to its Electrical Safety program, LANL operates an energy-control program to protect employees from all types of hazardous energy: Lockout/Tagout.



2.41 Lockout/Tagout Program

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.

What Is the Purpose of Lockout/Tagout?

Lockout/tagout prevents injury caused by the unexpected startup of a machine or the release of hazardous energy while workers are repairing equipment. Every year people are injured, maimed, and killed in accidents either because they failed to isolate the energy source of machinery they are working on or because a fellow worker has restarted equipment, not knowing anyone was in harm's way.

The Occupational Safety and Health Administration (OSHA) standard requires the use of procedures for isolating machines or equipment from their energy source before work is performed on the machine or equipment. These procedures include the placement of locks and tags to prevent the unexpected energization, startup, or release of stored energy that could hurt employees who are working on equipment, machines, or systems.

The Energy Control program is presented in P101-3, Lockout/Tagout for Hazardous Energy Control, which requires the use of locks and tags. Tags alone are unacceptable, except in certain circumstances.

You **must** complete lockout/tagout training before you are authorized to execute lockout/tagout. Discuss this issue with your supervisor.

2.42 Lockout/Tagout Program

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.

Lockout (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.



Authorized Worker



Lockout



Tagout



Affected Worker

Click on the correct label



The placement of a lock and tag by an authorized worker on an energy-isolating device in accordance with P101-3 to ensure that the equipment being controlled cannot be operated until the lock is removed.

NEXT >>

Tagout (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.



Authorized Worker



Lockout



Tagout



Affected Worker

Click on the correct label



The placement of a tag on only the device that controls the equipment, indicating that the equipment must not be operated until the tag is removed.

Well done!

Affected (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.


Authorized Worker


Lockout


Tagout


Affected Worker

Click on the correct label



Anyone who operates, uses, or works near equipment, machinery, or systems that are being serviced, maintained, or modified and that require lockout.

Anyone who operates, uses, or works near equipment, machinery, or systems that are being serviced, maintained, or modified and that require lockout.

NEXT >>

Authorized (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.



Authorized Worker



Lockout



Tagout



Affected Worker

Click on the correct label



Anyone who locks out and/or tags out equipment to perform servicing or maintenance on that equipment or to prohibit the operation of equipment that could pose a danger. Authorized workers must complete lockout/tagout training and be authorized by their RLM. Authorized workers may also be affected workers.

NEXT >>

viewmore (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Lockout/Tagout is a procedure put in place to reduce workplace hazards involving machinery and equipment.

You may not proceed to the next slide until you have viewed all of the content on this slide. Please return and finishing viewing all of the content.

RETURN

2.43 Lockout/Tagout Program

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

What is the Purpose of Lockout/Tagout?

Lockout/tagout prevents injury caused by the unexpected startup of a machine or the release of hazardous energy while workers are repairing equipment.

Who Conducts Lockout/Tagout Procedures?

Authorized workers conduct lockout/tagout procedures. These workers are appointed by line managers to service or maintain equipment, machinery, or systems and are trained in accordance with P101-3.

Why is Lockout/Tagout Important to You?

Anyone whose work is interrupted or otherwise affected by lockout/tagout is an affected worker. If you use a machine on which service or maintenance is performed under lockout/tagout or if you work in an area in which such service or maintenance is performed, you are an affected worker.

Regardless of your job at LANL, your work may require you to enter an area in which tags, with or without locks, are being used. Your entry into one of these areas will make you an affected worker. Your awareness of lockout/tagout procedures will help prevent workplace injuries.

DO NOT: 1) attempt to remove or alter locks or tags, or 2) attempt to restart or re-energize machines or equipment that is locked or tagged.

Required Training

To be a lockout/tagout authorized worker, you must complete hands-on classroom training.

2.44 Lockout/Tagout

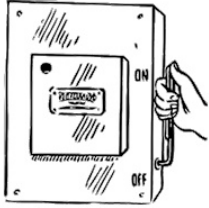
GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Use of Locks and Tags

EQUIPMENT THAT CAN BE LOCKED OUT

EQUIPMENT THAT CAN BE LOCKED OUT



Locks and tags can be found on circuit breakers, on/off switches, valves, or on any device that turns off or secures a source of energy. For example, a lock and tag might be found on the circuit breaker in your building, on the power switch of a band saw, or on the valve of a sprinkler system.

TYPES OF HAZARDOUS ENERGY

LOCKS AND TAGS USED AT LANL

YOUR RESPONSIBILITIES

2.45 Lockout/Tagout

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Use of Locks and Tags

EQUIPMENT THAT CAN BE LOCKED OUT

TYPES OF HAZARDOUS ENERGY

TYPES OF HAZARDOUS ENERGY

Electricity is not the only type of hazardous energy. Other types of energy include mechanical, hydraulic, pneumatic, chemical, radiological, and thermal.

LOCKS AND TAGS USED AT LANL

YOUR RESPONSIBILITIES

2.46 Lockout/Tagout

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Use of Locks and Tags

EQUIPMENT THAT CAN BE LOCKED OUT

TYPES OF HAZARDOUS ENERGY

LOCKS AND TAGS USED AT LANL

LOCKS AND TAGS USED AT LANL

Red locks and multiple-lock lockout devices are used with red tags that read DANGER-DO NOT OPERATE. These red locks and red tags are the only such devices allowed for use at LANL for the control of hazardous energy. Using these locks and tags prevents injuries while authorized workers are maintaining equipment, machines, or systems.

When you see a red tag, normally you will see it on a red lock and attached to an energy control device, such as a valve or a switch. That red lock/red tag is there to protect someone's life.

Do not tamper with the lock. If you see locks of different colors, treat them the same as you would a red lock.

YOUR RESPONSIBILITIES

2.47 Lockout/Tagout

GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Use of Locks and Tags

EQUIPMENT THAT CAN BE LOCKED OUT

TYPES OF HAZARDOUS ENERGY

LOCKS AND TAGS USED AT LANL

YOUR RESPONSIBILITIES

YOUR RESPONSIBILITIES

As an affected worker, you must

- 1 be able to recognize Laboratory locks and tags;
 - 2 never attempt to operate machines, equipment, or systems that are tagged or tagged and locked; and
- never remove or attempt to bypass locks and/or tags that have been placed on machines, equipment, or systems.

You must recognize and observe your responsibilities for lockout/tagout for your own safety, as well as the safety of your coworkers.

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GENERAL EMPLOYEE TRAINING: **Working Safely**

LOCKOUT/TAGOUT PROGRAM

Use of Locks and Tags

ED OUT
ENERGY
T LANL
ILITIES

YOUR RESPONSIBILITIES
As an affected worker, you must

Remember:
Ignoring lockout/tagout procedures has serious consequences for you and your coworkers. Any violation of a lockout/tagout procedure is subject to disciplinary action, up to and including termination.

I Understand

EQ

2.48 End of Module

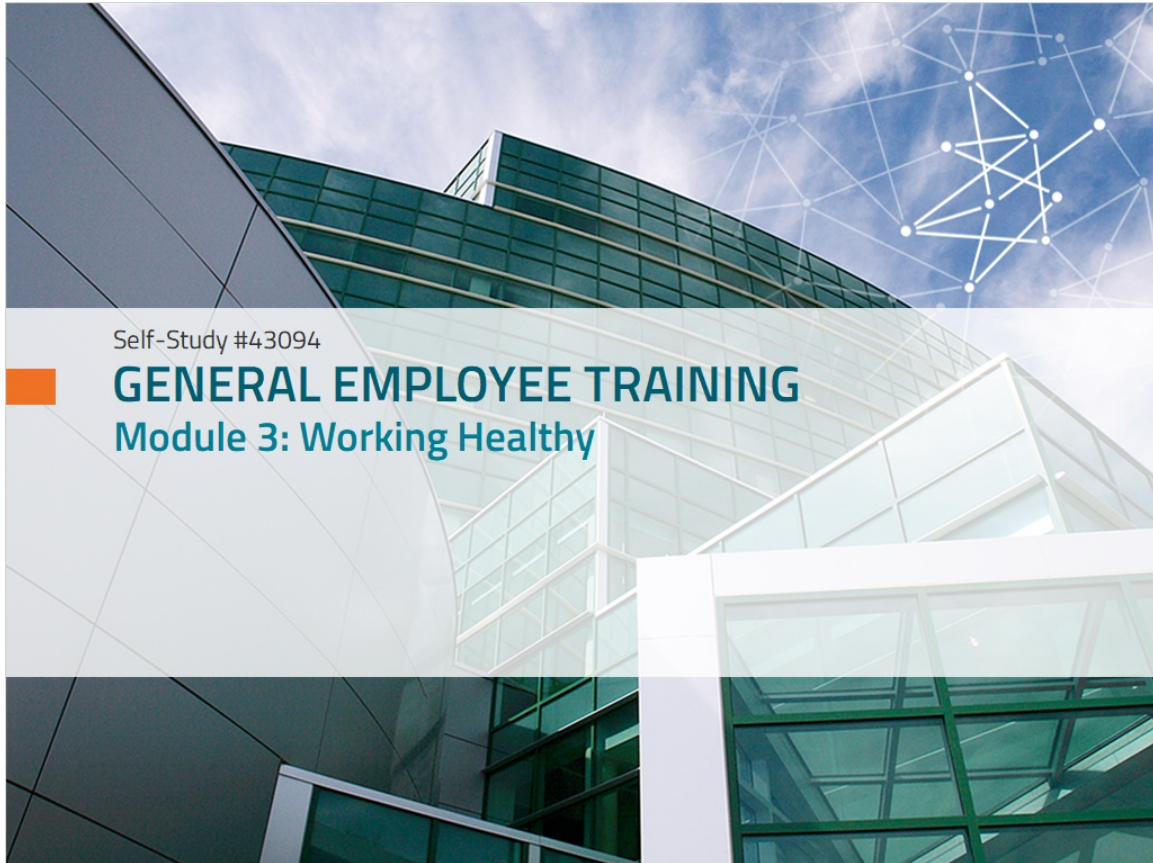
GENERAL EMPLOYEE TRAINING: **Working Safely**

You have come to the end of
this module.

Click the “Next” button to return to
the course menu.

3. Work Healthy

3.1 Introduction



3.2 Objectives

GENERAL EMPLOYEE TRAINING: *Working Healthy*

OBJECTIVES

What You Will Learn

When you have completed this section, you will be able to do the following:

1. Describe the medical evaluations required at LANL
2. State the procedures for reporting work-related injuries and illnesses
3. Identify the special health services and promotions available through the Occupational Health (OH) Group
4. Recognize how your medical records are handled
5. Define industrial hygiene and safety
6. List areas industrial hygienists and safety engineers support
7. Name industrial hygiene programs
8. List industrial safety programs

3.3 Occupational Health Services

GENERAL EMPLOYEE TRAINING: **Working Healthy**

OCCUPATIONAL HEALTH (OH) SERVICES

The Occupational Medicine (OM) clinical services building, located at TA-3, SM-1411, has a medical clinic for outpatient care and medical offices and facilities for medical testing, radiological imaging (x-ray) services, decontamination, counseling, and medical record storage.



ABOUT MEDICAL SERVICES

All medical services offered by OH are available to Laboratory employees. Services to contract workers vary with contracts between their employers and the Laboratory. Contract workers should ask their employers about available services.

MISSION

As part of its mission, Los Alamos National Laboratory's Occupational Health (OH) Group provides medical evaluations; clinical care for work-related injuries and illnesses, including radiation and contamination accidents; and health-promotion services. OH staff also oversee the Laboratory's reproductive health hazards program, work-related travel clinic services, substance abuse and mental health counseling (Employee Assistance Program), family and medical leave assistance, and medical surveillance, as well as medical certification programs.

3.4 Medical Evaluations

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

↑
click each
↓



medical leave (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

NEW-HIRE EVALUATION

↑
click each
↓

MEDICAL LEAVE

Any employee who is absent from work because of medical reasons for more than 5 consecutive calendar days (or an equivalent time period for those individuals on an alternative work schedule) must report to the OM clinic for evaluation before returning to work. An employee who was under a doctor's care must bring the doctor's release form upon returning. Any employee/worker who is absent because of surgery must report to OH to obtain a medical clearance before returning to work. The employee must bring a written medical clearance for work from his or her surgeon or primary care provider. OH staff will determine if the employee is able to return to work and if any additional medical work restrictions or limitations are needed.

new hire (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

**NEW-HIRE
EVALUATION**

↑
click each
↓

**MEDICAL
LEAVE**

A full medical evaluation at the OM clinic is scheduled for all new employees. The new-hire evaluation provides baseline occupational medical information as you begin your employment. New-hire medical evaluations are not provided for temporary workers (expected to be on-site fewer than 90 days) unless they will be performing work that requires medical surveillance or medical certification, or for subcontractors, unless they are enrolled in the Human Reliability Program (HRP) or some specific medical surveillance programs.

3.5 Medical Evaluations

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

↑
click each
↓



medical leave (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

NEW-HIRE EVALUATION

↑
click each
↓

MEDICAL LEAVE

Any employee who is absent from work because of medical reasons for more than 5 consecutive calendar days (or an equivalent time period for those individuals on an alternative work schedule) must report to the OM clinic for evaluation before returning to work. An employee who was under a doctor's care must bring the doctor's release form upon returning. Any employee/worker who is absent because of surgery must report to OH to obtain a medical clearance before returning to work. The employee must bring a written medical clearance for work from his or her surgeon or primary care provider. OH staff will determine if the employee is able to return to work and if any additional medical work restrictions or limitations are needed.

new hire (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

MEDICAL EVALUATIONS

All LANL employees must comply with all health evaluation requirements. Contract workers may be required to participate in some Laboratory-specific medical surveillance and certification evaluations.

**NEW-HIRE
EVALUATION**

↑
click each
↓

**MEDICAL
LEAVE**

A full medical evaluation at the OM clinic is scheduled for all new employees. The new-hire evaluation provides baseline occupational medical information as you begin your employment. New-hire medical evaluations are not provided for temporary workers (expected to be on-site fewer than 90 days) unless they will be performing work that requires medical surveillance or medical certification, or for subcontractors, unless they are enrolled in the Human Reliability Program (HRP) or some specific medical surveillance programs

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3.6 Other Evaluations

GENERAL EMPLOYEE TRAINING: *Working Healthy*

OTHER EVALUATIONS

Some job assignments require periodic medical surveillance or certification evaluations. For example:

1. individuals who work with asbestos, with identified carcinogens, or in high-noise areas are monitored for early signs of health effects; and
2. commercial truck drivers, respirator users, and security personnel are evaluated to ensure their health meets job performance standards before they are certified for their particular jobs.

↑
click each
↓



termination (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

OTHER EVALUATIONS

Some job assignments require periodic medical surveillance or certification evaluations. For example:

1. individuals who work with asbestos, with identified carcinogens, or in high-noise areas are monitored for early signs of health effects; and
2. commercial truck drivers, respirator users, and security personnel are evaluated to ensure their health meets job performance standards before they are certified for their particular jobs.

TERMINATION
EVALUATION

↑
click each
↓

FITNESS-
FOR-DUTY
EVALUATION

Before leaving the Laboratory, an employee is offered an exit medical evaluation. Employees who decline the offered medical exam must do so in writing.

fitness for duty (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

OTHER EVALUATIONS

Some job assignments require periodic medical surveillance or certification evaluations. For example:

1. individuals who work with asbestos, with identified carcinogens, or in high-noise areas are monitored for early signs of health effects; and
2. commercial truck drivers, respirator users, and security personnel are evaluated to ensure their health meets job performance standards before they are certified for their particular jobs.

TERMINATION EVALUATION

↑
click each
↓

FITNESS- FOR-DUTY EVALUATION

Supervisors may refer a worker to OH for a fitness-for-duty (FFD) evaluation if they are concerned about



If your supervisor refers you for an FFD medical evaluation, **you must comply**. P102-3, Medical Evaluation for Work, describes the process in more detail. See the “Your Medical Records” section later in this training for information on how your medical records privacy is protected.

3.7 Work-Related Injuries & Illnesses

GENERAL EMPLOYEE TRAINING: **Working Healthy**

WORK-RELATED INJURIES OR ILLNESSES

Occupational Health (OH) medical providers perform initial care and follow-up treatment for work-related injuries and illnesses of LANL employees, Maintenance and Site Services, Protective Force, Los Alamos Fire Department, and DOE/NNSA Los Alamos Field Office workers. The OH staff works closely with the worker's compensation specialists and the Early Return to Work coordinator.

CONTRACT WORKERS

For other contract workers, OH provides initial care for work-related injuries or illnesses that occur on LANL property. Follow-up treatment is carried out according to the terms of the individual employer contracts.

Injuries and illnesses unrelated to work should be treated by a private health care provider. Medical restrictions imposed by your private physician must be evaluated by OH to ensure that you are able to work safely.

3.8 Reporting Injuries & Illnesses

GENERAL EMPLOYEE TRAINING: **Working Healthy**

REPORTING WORK-RELATED INJURIES OR ILLNESSES

All work-related injuries or illnesses must be reported to your supervisor. During work hours, go to the Occupational Medicine (OM) building for evaluation and treatment. For non-emergency injuries or illnesses, LANL employees must be evaluated initially by Occupational Health (OH) staff before being treated elsewhere for an occupational injury/illness. Employees of subcontractors are urged to go to OH, but may use their own emergency service. During normal working hours, report to the OM clinic for evaluation. Your manager/designee should accompany you. After hours, on weekends, or offsite, call OH (24 hours/day) to reach the on-call provider for direction regarding where and when to report for evaluation and treatment.

↑
click each
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911 (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

REPORTING WORK-RELATED INJURIES OR ILLNESSES

All work-related injuries or illnesses must be reported to your supervisor. During work hours, go to the Occupational Medicine (OM) building for evaluation and treatment. For non-emergency injuries or illnesses, LANL employees must be evaluated initially by Occupational Health (OH) staff before being treated elsewhere for an occupational injury/illness. Employees of subcontractors are urged to go to OH, but may use their own emergency service. During normal working hours, report to the OM clinic for evaluation. Your manager/designee should accompany you. After hours, on weekends, or offsite, call OH (24 hours/day) to reach the on-call provider for direction regarding where and when to report for evaluation and treatment.

**BEFORE
RETURNING
TO WORK**

↑
click each
↓

**WHEN TO
CALL 911**

If the injury/illness is a medical emergency, call 911 immediately to get an ambulance; then notify your manager. If you are not sure if you need an ambulance or where to go for treatment, call OH for direction.



RETURN (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

REPORTING WORK-RELATED INJURIES OR ILLNESSES

All work-related injuries or illnesses must be reported to your supervisor. During work hours, go to the Occupational Medicine (OM) building for evaluation and treatment. For non-emergency injuries or illnesses, LANL employees must be evaluated initially by Occupational Health (OH) staff before being treated elsewhere for an occupational injury/illness. Employees of subcontractors are urged to go to OH, but may use their own emergency service. During normal working hours, report to the OM clinic for evaluation. Your manager/designee should accompany you. After hours, on weekends, or offsite, call OH (24 hours/day) to reach the on-call provider for direction regarding where and when to report for evaluation and treatment.

BEFORE RETURNING TO WORK

↑
click each
↓

WHEN TO CALL 911

You must report to OH before returning to work, even if you have been treated for your occupational injury/illness somewhere other than OH. By law, all work-related injuries or illnesses must be reported within 15 calendar days to be considered for worker's compensation. If you have questions about the process, contact OH.

3.9 Ergonomics

GENERAL EMPLOYEE TRAINING: **Working Healthy**

ERGONOMICS AND SERVICES FOR PERSONS WITH DISABILITIES

Because injuries can develop following repetitive activities, such as typing, lifting, bending, and twisting the back and upper extremities, LANL provides ergonomics services to help reduce or eliminate work-related factors that can cause these injuries. These services include:



LANL also has systems in place to assist anyone onsite with temporary or permanent disabilities. OH can help with requests for work adjustments or reasonable accommodations of temporary or permanent disabilities.

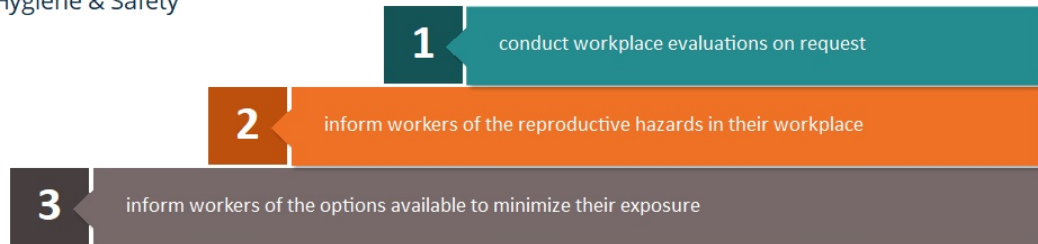
3.10 Reproductive Health

GENERAL EMPLOYEE TRAINING: **Working Healthy**

PROTECTION AGAINST REPRODUCTIVE HEALTH HAZARDS

Reproductive health services are available if you are pregnant, planning a pregnancy (regardless of whether you are a male or female employee), or nursing a baby. The Reproductive Health Assistance Program (RHAP) helps to protect against reproductive health hazards to which you may be exposed in the workplace.

Through the RHAP, representatives from OH, Radiation Protection, and Industrial Hygiene & Safety



If you are pregnant, you are encouraged to declare your pregnancy in writing to your supervisor and/or OH at MS D421.

To remove yourself from this program during pregnancy, the request must also be made in writing.

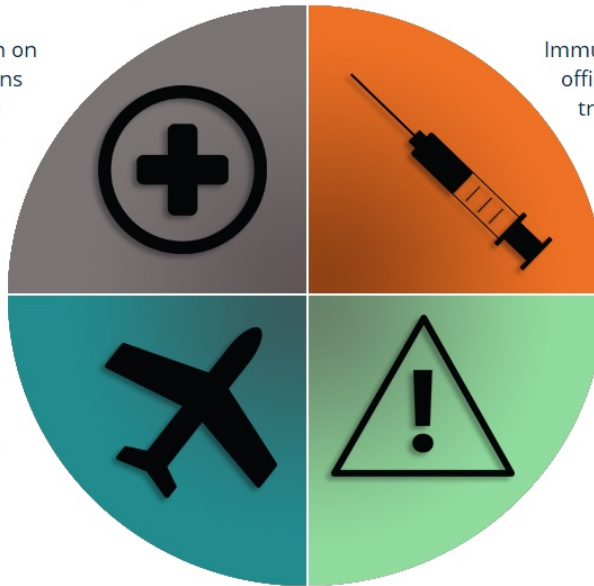
3.11 Travel Clinic Services

GENERAL EMPLOYEE TRAINING: *Working Healthy*

TRAVEL CLINIC SERVICES

The Occupational Medicine travel clinic offers information on the health risks of travel to foreign countries. The clinic provides

Information on
finding physicians
and/or medical care
while on travel



Immunizations for
official Laboratory
travel

Information on
overcoming jet lag

Centers for Disease
Control travel advisories

3.12 EAP

GENERAL EMPLOYEE TRAINING: **Working Healthy**

EMPLOYEE ASSISTANCE PROGRAM COUNSELING AND REFERRAL

The Employee Assistance Program (EAP) provides confidential, short-term counseling. Any LANL badge holder may schedule an appointment with a counselor to discuss any difficulties they are experiencing at work or in their personal lives.

↑
click each
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EAP Services (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

EMPLOYEE ASSISTANCE PROGRAM COUNSELING AND REFERRAL

The Employee Assistance Program (EAP) provides confidential, short-term counseling. Any LANL badge holder may schedule an appointment with a counselor to discuss any difficulties they are experiencing at work or in their personal lives.

CONFIDENTIALITY

↑
click each
↓

EAP SERVICES

EAP services include

- individual counseling
- referrals to outside counseling and treatment
- crisis response and support
- stress management
- veteran's issues
- DOE actions on security clearances
- management consultations.

Call the EAP with questions or to schedule an appointment.

confidentiality (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

EMPLOYEE ASSISTANCE PROGRAM COUNSELING AND REFERRAL

The Employee Assistance Program (EAP) provides confidential, short-term counseling. Any LANL badge holder may schedule an appointment with a counselor to discuss any difficulties they are experiencing at work or in their personal lives.

CONFIDENTIALITY

↑
click each
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**EAP
SERVICES**

Confidentiality is of primary importance to all EAP counselors. We will not release any information regarding your contact with the EAP without your written consent, unless we are obligated by law to release information regarding issues of danger to self or others, or the abuse or neglect of children or the elderly.

3.13 Preventative Medicine

GENERAL EMPLOYEE TRAINING: **Working Healthy**

PREVENTATIVE MEDICINE SERVICES

OH provides preventive medicine services, such as

- 1 blood pressure monitoring
- 2 screening services (for example, testing blood sugar and blood pressure)
- 3 training on health-related topics (for example, back care and ergonomics)
- 4 health promotion and fitness incentive programs

OH also provides health and fitness programs through the Wellness Center, which is located at TA-3, SM-1663. Programs include

- 1 weight and stress management
- 2 smoking cessation
- 3 cholesterol reduction
- 4 injury prevention
- 5 exercise classes

click to learn more about
the
**Virgin Pulse
Wellness Program**

3.14 Your Medical Records

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

Your medical records are private. OH keeps health records on all individuals seen in the OM onsite clinic. You may see your own health records. With your written authorization, LANL will send personal health information to anyone you choose (such as your primary care physician and insurance companies).

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORKERS' COMPENSATION

medical records (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

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Your medical records are private. OH keeps health records on all individuals seen in the OM onsite clinic. You may see your own health records. With your written authorization, LANL will send personal health information to anyone you choose (such as your primary care physician and insurance companies).

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORKERS' COMPENSATION

3.15 Your Medical Records

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR PERSONAL HEALTH INFORMATION

YOUR PERSONAL HEALTH INFORMATION

Your personal health information is protected by the Health Insurance Portability and Accountability Act (HIPAA) Medical Privacy Standards and by other applicable laws and regulations. HIPAA describes how your personal health information may (and may not) be used or shared. Worker and employer rights and responsibilities under this law are described in the Laboratory Notice of Privacy Practices, which is available at the OM facility. EAP records and Human Reliability Program (HRP) records are kept confidential and separate from the OH patient records.

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORKERS' COMPENSATION

3.16 Your Medical Records

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WHAT OH WILL TELL YOUR SUPERVISOR

OH will tell your supervisor only

- whether leave for health reasons is appropriate,
- how long your leave may last, and
- what your medical work restrictions or limitations are when you return.

WORK RELATED INJURY

WORKERS' COMPENSATION

3.17 Your Medical Records

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORK RELATED INJURY

If you are seen for a work-related injury or illness, need-to-know information related to that injury or illness is sent to the worker's compensation case workers and to the safety investigators for review.

WORKERS' COMPENSATION

3.18 Your Medical Records

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORKER'S COMPENSATION

WORKER'S COMPENSATION

Worker's compensation caseworkers will ensure that worker's compensation benefits are administered properly under New Mexico law. Safety investigators will identify workplace hazards and ensure that OSHA reporting requirements are met.

WORKERS COMP (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Healthy**

YOUR MEDICAL RECORDS

YOUR MEDICAL RECORDS

YOUR PERSONAL HEALTH INFORMATION

WHAT OH WILL TELL YOUR SUPERVISOR

WORK RELATED INJURY

WORKER'S COMPENSATION

WORKER'S COMPENSATION

Worker's compensation caseworkers will ensure that worker's compensation benefits are administered properly under New Mexico law. Safety investigators will identify workplace hazards and ensure that OSHA reporting requirements are met.

3.19 Industrial Hygiene & Safety

GENERAL EMPLOYEE TRAINING: **Working Healthy**

INDUSTRIAL HYGIENE AND SAFETY

Industrial hygiene and safety involves the

ANTICIPATION

RECOGNITION

EVALUATION

CONTROL

CONFIRM

of workplace hazards.

Industrial hygiene focuses on health hazards, whereas industrial safety focuses on physical hazards. These hazards can cause illness, discomfort, serious injury, or death.

Laboratory requirements define how the Laboratory implements the regulations and standards established by the aforementioned agencies. To access these requirements online, search for the Policy Center on the Laboratory's homepage.

click for more information:
Regulating Agencies

3.20 Occupational Safety & Health Organization

GENERAL EMPLOYEE TRAINING: **Working Healthy**

THE OCCUPATIONAL SAFETY AND HEALTH ORGANIZATION

The Laboratory's Occupational Safety and Health (OSH) Division supports a safe and healthy workplace. Contact the organization for help with institutional health and safety issues and regulatory compliance issues.

OSH maintains a Safety Help Desk that can be reached by calling

665-SAFE

or emailing

safety@lanl.gov

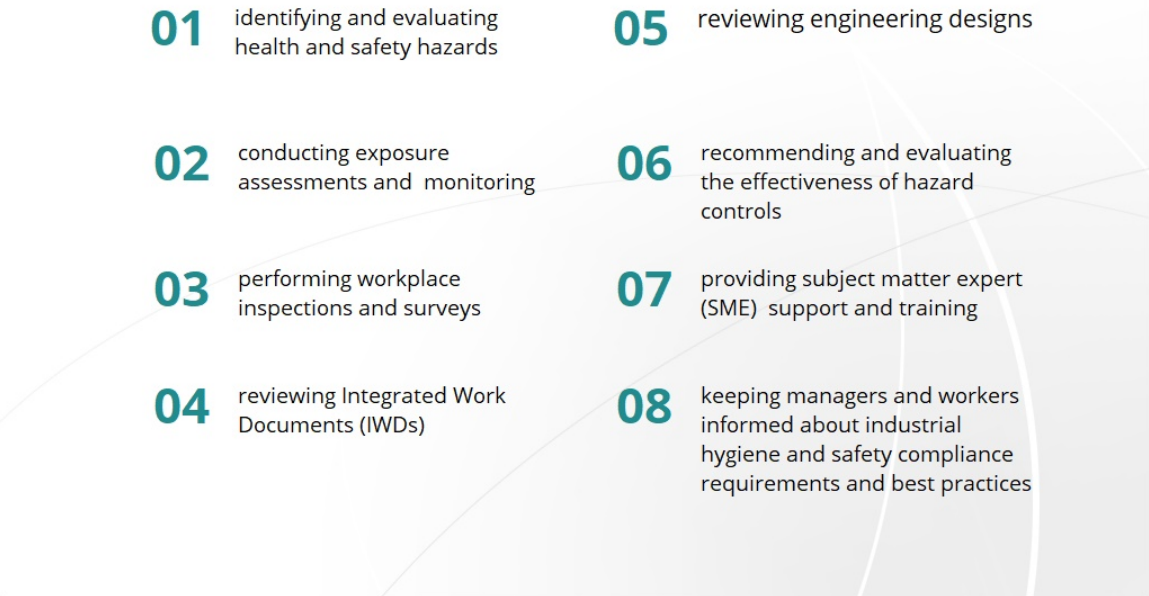
You may also have deployed health and safety professionals assigned to your organization. Make it a point to meet these individuals and make use of their valuable expertise early in the project planning process and as needed.

3.21 Hygienists & Engineers

GENERAL EMPLOYEE TRAINING: *Working Healthy*

INDUSTRIAL HYGIENISTS AND SAFETY PROFESSIONALS

Industrial hygienists and safety professionals at LANL provide support in the following areas:

- 
- 01** identifying and evaluating health and safety hazards
 - 02** conducting exposure assessments and monitoring
 - 03** performing workplace inspections and surveys
 - 04** reviewing Integrated Work Documents (IWDs)
 - 05** reviewing engineering designs
 - 06** recommending and evaluating the effectiveness of hazard controls
 - 07** providing subject matter expert (SME) support and training
 - 08** keeping managers and workers informed about industrial hygiene and safety compliance requirements and best practices

3.22 Industrial Hygiene Programs

GENERAL EMPLOYEE TRAINING: *Working Healthy*

INDUSTRIAL HYGIENE PROGRAMS

OSH manages industrial hygiene programs for the Laboratory to minimize health hazards in the workplace and to help ensure the well-being of workers.

If any of these programs apply to your work area or work activities, you must be familiar with their Laboratory-specific requirements. To find more information on these various hazards, go to the Safety tab on the Laboratory's homepage and select the Industrial Hygiene and Safety link. On that page, you will find links to other web pages containing information on safety requirements, training, resources, and contacts.

ASBESTOS, BERYLLIUM, AND LEAD WORK

CONFINED SPACES

CHEMICAL HAZARD COMMUNICATION, CHEMICAL HYGIENE, AND CHEMICAL STORAGE

RESPIRATORY PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT

NOISE AND HEARING CONSERVATION

BIOSAFETY, INCLUDING BLOODBORNE PATHOGENS

EXPOSURE ASSESSMENTS

SPECIFIC HAZARDS, SUCH AS CARCINOGENS, TOXIC MATERIALS, THERMAL STRESS (HOT OR COLD), AND NONIONIZING RADIATION

3.23 Industrial Safety Programs

GENERAL EMPLOYEE TRAINING: *Working Healthy*

INDUSTRIAL SAFETY PROGRAMS

Industrial safety programs are managed by OSH for the Laboratory in the following areas to help ensure the safety of workers and operations and to minimize property loss.

If any of these programs apply to your work area or activities, you must be familiar with their LANL-specific requirements. Depending on your specific work activities and area, you may be required to attend one or more safety training courses.

- CONSTRUCTION SAFETY
- CRANES, HOISTS, LIFTING DEVICES, AND RIGGING SAFETY
- ELECTRICAL SAFETY
- EXPLOSIVES SAFETY
- FALL PROTECTION
- FORKLIFT SAFETY
- GLOVEBOX SAFETY
- LASER SAFETY
- LOCKOUT/TAGOUT
- MACHINE SAFEGUARDING
- NON-SECURITY FIREARMS SAFETY
- PRESSURE SAFETY AND CRYOGENS
- VEHICLE AND PEDESTRIAN SAFETY

To find more information on these various hazards, go to the Safety tab on the Laboratory's homepage and select the Industrial Hygiene and Safety link. On that page, you will find a link to All Systems, Programs & Contacts, a web page that provides information on safety systems and programs and program contact names.

3.24 OMBUDS

GENERAL EMPLOYEE TRAINING: *Working Healthy*

OMBUDS OFFICE

The mission of the Ombuds Office is to enhance communication and mitigate interpersonal conflict at the Laboratory. Designated as a neutral entity for facilitating the informal resolution of workplace concerns, the Ombuds staff provides confidential, impartial, and informal conflict resolution and problem-solving services to the Laboratory workforce, including students and contractors, by:

SAFE PLACE	COACHING	MEDIATION	COMMUNICATION
Providing a safe place for individuals to engage in informal and confidential conversations	Coaching and assisting individuals to reframe challenges and evaluate options	Offering informal mediation and facilitation between parties in conflict and referrals to appropriate resources and policy	Delivering communication skills training through educational presentations and workshops

3.25 What Lies Ahead

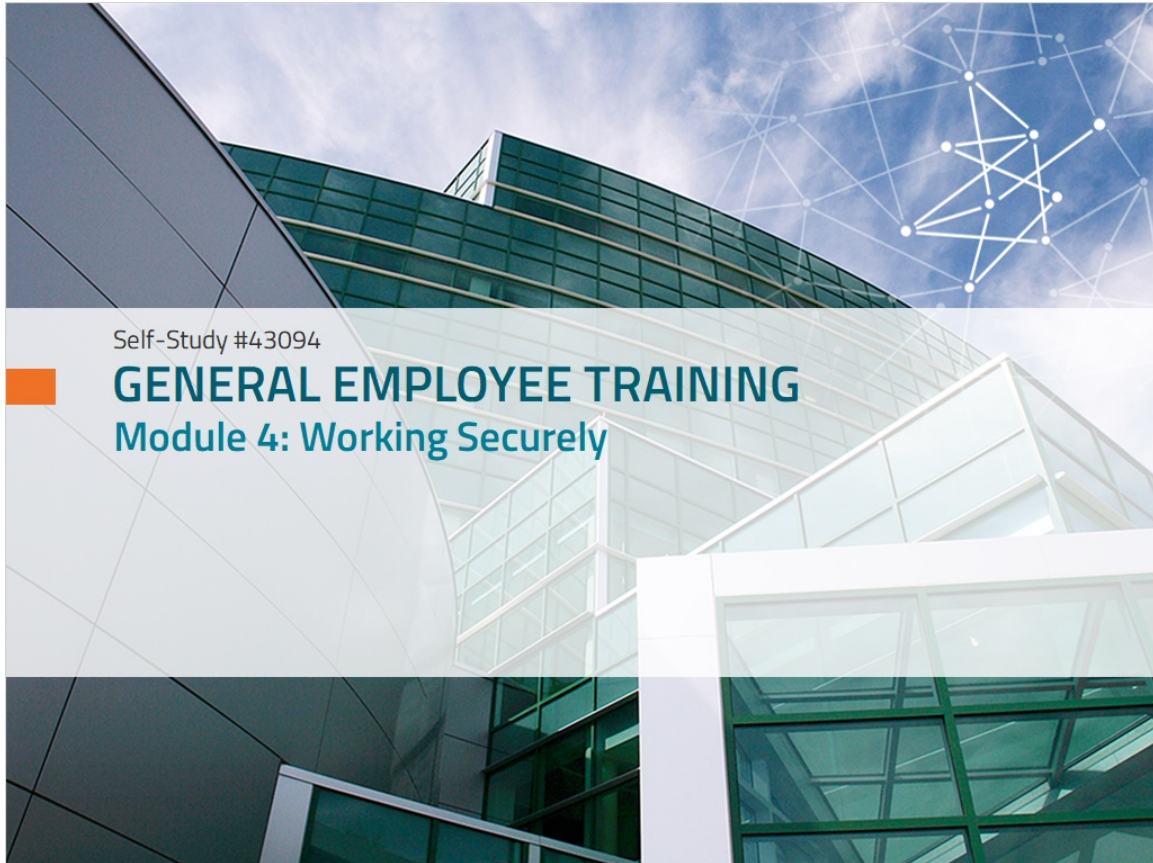
GENERAL EMPLOYEE TRAINING: **Working Healthy**

You have come to the end of
this module.

Click the “Next” button to continue to
return to the course menu.

4. Working Securely

4.1 Introduction



4.2 Objectives

GENERAL EMPLOYEE TRAINING: **Working Securely**

OBJECTIVES

What You Will Learn

When you have completed this section, you will be able to do the following:

1. Identify the organization responsible for security at the Laboratory
2. Describe the elements of and proper use of your security badge
3. Summarize your security responsibilities
4. Distinguish between classified and controlled unclassified information
5. Identify what you must do before using a Laboratory computer
6. Recognize that hostile intelligence threats, foreign contacts, and travel to sensitive countries must be reported

4.3 Security Organization

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY ORGANIZATION

The Defense Security Program (DFS) of the Associate Level Directorate for Environment, Safety, Health, Quality, Safeguards, and Security (ESHQSS) enables the Laboratory to achieve its national security and science missions. DFS is responsible for preventing and neutralizing threats to the Laboratory.

MISSION

The mission of DFS is to protect LANL's special nuclear material, property, information, and personnel.

MORE INFORMATION

For answers to security-related questions, contact your Deployed Security Officer.

4.4 Nuclear Material Control and Accountability

GENERAL EMPLOYEE TRAINING: **Working Securely**

SAFEGUARDING NUCLEAR MATERIAL

The Laboratory actively protects our nation against nuclear threats. DOE and the Laboratory's Nuclear Material Control and Accountability (NMCA) program are designed to detect and deter the theft and diversion of accountable nuclear material and special nuclear material.



4.5 Lab Protective Force

GENERAL EMPLOYEE TRAINING: **Working Securely**

LABORATORY PROTECTIVE FORCE

One of the most visible elements of the DFS is a Protective Force (PF) that provides security services to the Laboratory. Hired as a subcontractor organization, the PF officers provide physical security for facilities, fixed and roving security patrols, access control and vehicle inspections, and security emergency response.

Security Services and Equipment

PF officers can be seen wearing military-style uniforms and tactical vests, operating military vehicles, and carrying a wide variety of equipment, including radios and weapons. All PF officers are authorized to carry cell phones, pagers, and tactical radios.



4.6 Lab Protective Force

GENERAL EMPLOYEE TRAINING: **Working Securely**

LABORATORY PROTECTIVE FORCE



Laboratory Canine Teams

The Laboratory additionally has canine teams hired as a subcontractor organization, to deter and detect potential threats. Canine dogs and their handlers may be involved in activities such as explosive detections, suspect apprehension, and contraband searches. Arguing and/or interfering with the canine/handler is not tolerated.

Personal and Vehicle Inspections

All vehicles and personnel on Laboratory property are subject to random personal and vehicle inspections by PF personnel and/or canine teams.

For more information go to LANL's homepage and search the Defense Security Program.



4.7 Lab Protective Force

GENERAL EMPLOYEE TRAINING: **Working Securely**

LABORATORY PROTECTIVE FORCE

COOPERATION REQUIREMENTS



All LANL workers are **required** to cooperate with PF officers on security matters and participate fully in the Laboratory's security programs. When a PF officer directs a Laboratory worker to perform an action (especially in emergency situations), the LANL employee **must follow directions**.

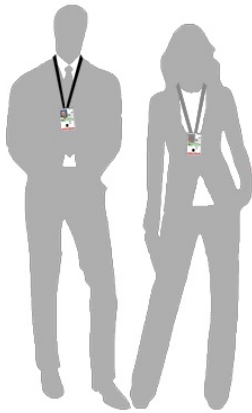
Arguing, using inappropriate language and offensive hand gestures, resisting, or interfering with officers will not be tolerated. Officers are trained to be courteous, but also to take control of any situation. Officers are not obligated to respond to questions, offer explanations, or justify their instructions.

4.8 Your Security Badge

GENERAL EMPLOYEE TRAINING: **Working Securely**

YOUR SECURITY BADGE

All workers at the Laboratory are issued security badges before reporting to work. This badge serves as your official identification for government work and allows (or restricts) your access to certain areas of the Laboratory.



Wear your badge at all times while on Laboratory-owned or -leased property. Do not wear your badge when off Laboratory property, and do not leave your badge where it might be stolen.

Wear your badge above the waist, on the front side of your body, with the photograph visible.

Do not use your badge for unofficial identification, such as for cashing checks. (You may use your badge off site as identification for official Laboratory purposes, but never allow anyone to make a photocopy or take a photo of your badge.)

Keep your badge safe from damage.

Remember, your badge is the property of the US government. You must return your badge to the Badge Office when you change Laboratory employers; your clearance level changes; your badge expires; or if you quit, retire, or no longer need it.

4.9 Lost or Stolen Badges

GENERAL EMPLOYEE TRAINING: **Working Securely**

LOST OR STOLEN BADGES

If your badge is lost during work hours, report it in person to the Badge Office. If your badge has been stolen, report it immediately to the Badge Office, your deployed security officer, or the Security Incident Team. Badges reported as lost or stolen will cease working in any Laboratory badge readers, even if found. This is a permanent status change so that the badge reported lost or stolen can never be re-activated.

If you forget your badge, you may receive a temporary badge after presenting proper identification at the Badge Office. A temporary badge will be issued only twice in a 12 month period. Your manager's approval is required if an additional temporary badge is needed.



4.10 Types of Badges

TYPES OF SECURITY BADGES

A limited number of security badge types are in use at the Laboratory. These include:



DOE/United States federal security badges



LANL site-specific badges



Temporary badges



Uncleared foreign national badges



Visitor badges

4.11 Federal Security Badge

GENERAL EMPLOYEE TRAINING: **Working Securely**

FEDERAL SECURITY BADGES

A federal security badge, called the Homeland Security Presidential Directive-12 - compliant or HSPD-12 badge, is issued to LANL employees with an L or Q clearance. The badge incorporates an integrated circuit chip, which stores limited personal information about the badge holder, such as a personal identification number (PIN), electronic fingerprints, and a digital image.

The federal security badge is issued with an electromagnetically opaque sleeve that protects the badge. It also protects the badge's integrated circuit chip from being pinged or accessed without proper authorization. Unless you are showing the badge to a PF officer or swiping it through a badge reader, chipped badges must be kept in the supplied protective sleeve at all times.

You should take the following measures to protect your HSPD-12 badge:



Do not mark on, punch holes in, or bend your badge.



Avoid subjecting the badge to excessive heat (e.g., clothes dryer) or direct sunlight (e.g., car dashboards).



Do not scratch the magnetic strip on the badge.



Keep the badge away from stereo equipment, speakers, and other sources of magnetic energy.



Do not use your badge as a window scraper or any other kind of scraper.

4.12 Using Your Badge

GENERAL EMPLOYEE TRAINING: **Working Securely**

USING YOUR BADGE TO GET AROUND

General Access Areas (GAAs)

GAAs are generally open to all workers and the public during normal business hours. There are no identification or badge requirements to enter a GAA during normal business hours. Privately-owned vehicles (POVs) are permitted to enter GAAs unless prohibited by site-specific requirements.

Property Protection Areas (PPAs)

PPAs are established to protect workers, buildings, facilities, and property. PPAs are areas where access is controlled through the use of physical barriers, access control systems, and/or protective personnel. For unescorted access to a PPA, you must possess a HSPD-12 security badge or LANL site-specific badge. Visitors who do not possess either badge may be issued a LANL Visitor badge for access. Privately owned vehicles may be authorized to enter PPAs for official purposes, unless restricted by site-specific access requirements.

4.13 Piggybacking, etc.

GENERAL EMPLOYEE TRAINING: **Working Securely**

USING YOUR BADGE TO GET AROUND



"PIGGYBACKING"

"TAILGATING"

and

"VOUCHING"

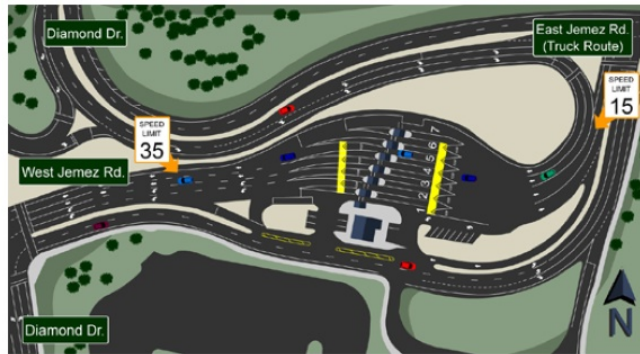
Remember that "piggybacking" (allowing another individual with the required clearance, appropriate badge, and need-to-know access a security area without using automated access controls, such as badge or palm readers) and "tailgating" (following someone through an access control system without the knowledge of that person) are not allowed unless conducted under approved procedures. In addition, vouching is prohibited (confirming that someone has access to the area). Every worker must use his or her own badge to gain access to a security area.

4.14 Vehicle Access Portals

GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



approach (Slide Layer)

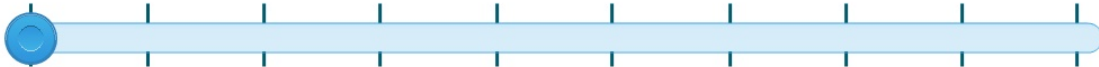
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).

**APPROACH
SLOWLY**

Approach the VAP safely, paying attention to your speed, other traffic, bicycles, personnel on foot, etc.



traffic lanes (Slide Layer)

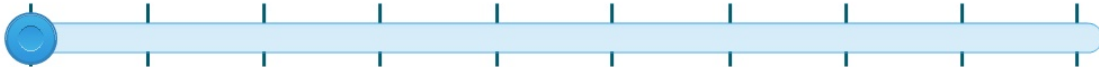
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



Follow the traffic lanes and instructional signs.



open (Slide Layer)

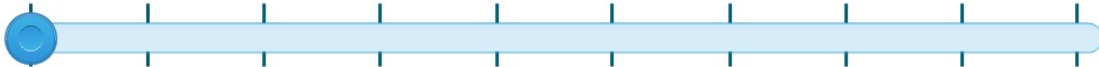
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).

OPEN

If the traffic control drop arms are up and the green OPEN sign is illuminated, that lane is open.

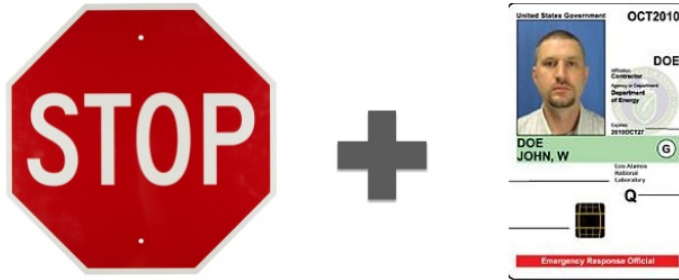


stop (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Securely

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



All vehicles must **STOP** at the portal, and all drivers must present a badge to the officer. **DO NOT** drive through the VAP without stopping and being authorized to proceed. (If you do not stop, the PF will pursue your vehicle, stop you, inspect your vehicle, and submit an incident report, and you may be issued a security infraction.)



bicycle (Slide Layer)

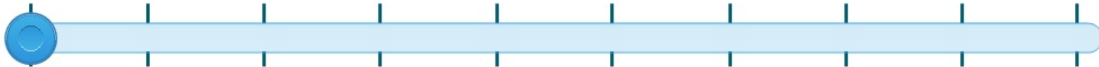
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



Bicyclists: The VAPs on Pajarito Road require bicyclists to stop under an Elevated Security Condition (SECON 3). All LANL VAPs require bicyclists to stop under a High Security Condition (SECON 2). If stopping is not required, they may proceed slowly and safely through the VAP.



proceed (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



After the PF officer has given you verbal or hand signal direction to proceed, you may proceed through the VAP.



merge (Slide Layer)

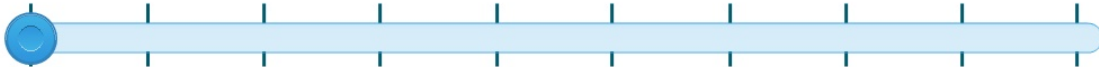
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



Merge into the main roadway with caution, considering other vehicles in the area that are also exiting and merging.



badge (Slide Layer)

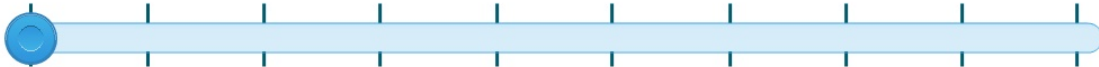
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



At the VAPs on Pajarito Road, all individuals must show a valid security badge (Federal Security Badge or LANL site-specific badge issued by the Badge Office). Workers with generic "Visitor" badges (badges not issued directly to a worker by the Badge Office) can be escorted through the Pajarito corridor by a worker who is approved for unescorted access to the corridor with an approved security plan for the work being conducted.



identity (Slide Layer)

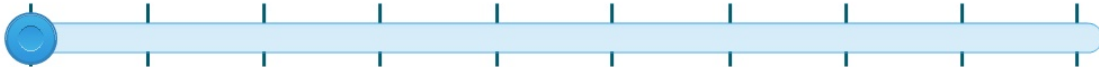
GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).



Each PF officer has the duty and obligation to verify the identity of persons entering. You must comply with requests to remove anything that may obstruct your facial features, such as helmets, hats, scarves, or sunglasses. Vehicle access requirements may change according to the security condition. Please go to the Security website for more information on VAP requirements.



warning (Slide Layer)

GENERAL EMPLOYEE TRAINING: Working Securely

ENTERING VEHICLE ACCESS PORTALS (VAPs)

To enter some Laboratory roadways, you will be required to go through a vehicle access portal (VAP).







Slide to learn about vehicle access re

Click through all steps before continuing.

4.15 Prohibited Articles

GENERAL EMPLOYEE TRAINING: **Working Securely**

PROHIBITED ARTICLES ON LABORATORY-OWNED OR LEASED PROPERTY

-  Non-government owned firearms, dangerous weapons (including knives with blades longer than 2.5 inches), explosives, incendiary devices, and other instruments or materials likely to cause personal injury or property damage are not allowed on Laboratory property or inside Laboratory-operated facilities, unless they are government property or are specifically authorized.
-  Also not allowed are alcohol, illegal drugs, and any other articles prohibited by law.
-  Photography is not permitted on Laboratory-owned or leased property without a specific permit.
-  The enablement of Bluetooth and Wi-Fi is only permitted in General Access Areas and must be disabled upon entering PPAs or above.

LANL has implemented wireless networks that are available in some locations.

Contact your organizational computer security representative (OCSR) to find out if wireless service is available in your work location.

4.16 Security Clearance

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY CLEARANCE

Should your job require access to security areas at the Laboratory, you may need to obtain a DOE security clearance.

DOE uses three levels of security clearances: Uncleared (U), Limited (L), and Q. The granting of a clearance is an access authorization, which allows you to enter certain security areas, but does not immediately give you permission to access classified information. Should your job require access to classified information, you will need security clearance access authorizations based on your "need to know." We'll talk more about this concept later in this module.

4.17 Security Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY AREAS

Access to security areas is limited by your DOE clearance level. There are three general types of security areas at the Laboratory, each with increasingly stringent access requirements. These areas include:

LIMITED AREAS

Limited Areas (LAs)

are security areas established for the protection of classified matter and/or Category III and higher quantities of Special Nuclear Material (SNM). In addition to requiring a DOE security badge or LANL site-specific badge, an active L or Q clearance is required for unescorted access, unless more stringent controls are implemented by the security area's facility management. Privately owned vehicles are not permitted in LAs, unless authorized and documented in a Site Safeguards and Security Plan. Temporary LAs may also be occasionally established in areas normally designated as a GAA or PPA with an approved security plan.

SPECIAL ACCESS LIMITED AREAS

SCIF AND SAPF

PROTECTED AREAS

MATERIAL ACCESS AREAS

4.18 Security Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY AREAS

Access to security areas is limited by your DOE clearance level. There are three general types of security areas at the Laboratory, each with increasingly stringent access requirements. These areas include:

LIMITED AREAS

SPECIAL ACCESS LIMITED AREAS

Special Access Limited Areas (SALAs) and Q-only LAs

SALAs and Q-only LAs are established according to the Laboratory mission or as designated by the Responsible Line Manager (RLM). For unescorted access into SALAs and Q-only LAs, personnel must hold an active Q Security Clearance.

SCIF AND SAPF

PROTECTED AREAS

MATERIAL ACCESS AREAS

4.19 Security Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY AREAS

Access to security areas is limited by your DOE clearance level. There are three general types of security areas at the Laboratory, each with increasingly stringent access requirements. These areas include:

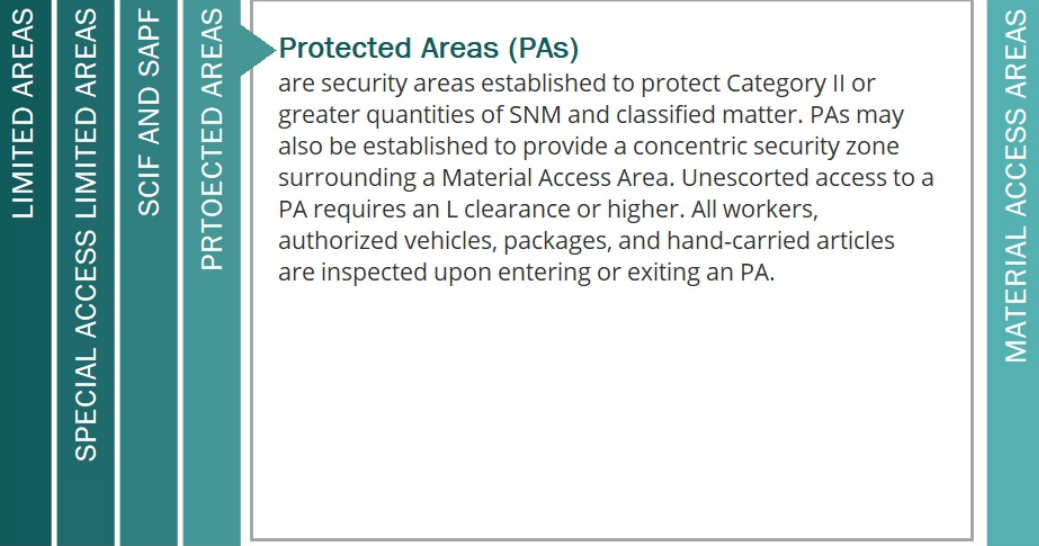


4.20 Security Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY AREAS

Access to security areas is limited by your DOE clearance level. There are three general types of security areas at the Laboratory, each with increasingly stringent access requirements. These areas include:

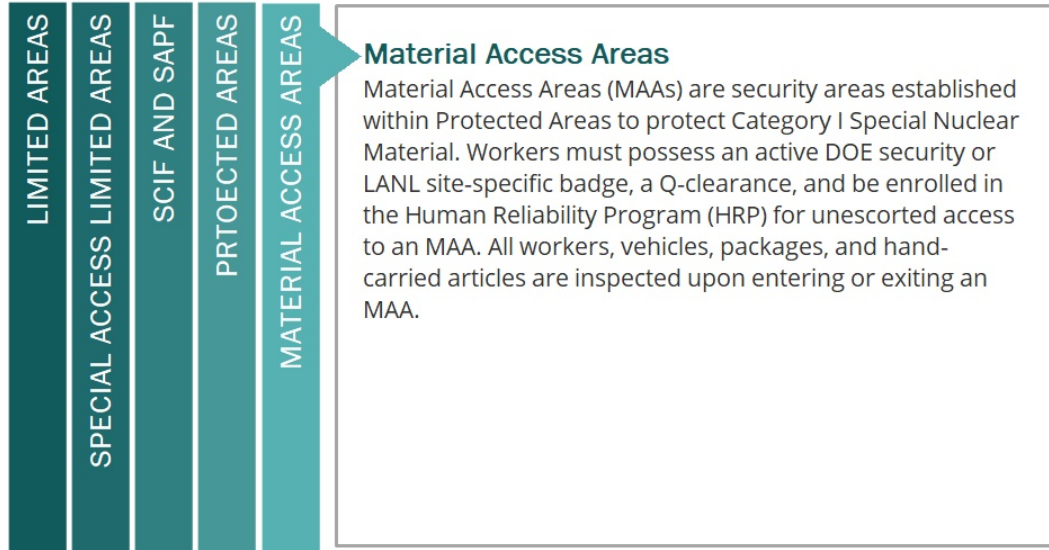


4.21 Security Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

SECURITY AREAS

Access to security areas is limited by your DOE clearance level. There are three general types of security areas at the Laboratory, each with increasingly stringent access requirements. These areas include:



4.22 Escorting

GENERAL EMPLOYEE TRAINING: **Working Securely**

ESCORTING UNCLEARED VISITORS

If you have a security clearance, you may need to escort an uncleared US citizen visitor into a security area. To do this, you must

- 1 Hold the appropriate access authorization
- 2 Be aware of site-specific procedures
- 3 Be trained in Laboratory escort procedures (UTrain course #18366)
- 4 Ensure that site-specific requirements for escorting in the area are followed

Escorting of uncleared foreign nationals into security areas is rarely allowed and must be handled by the Foreign Visits and Assignments Team.

4.23 Entering and Leaving Secure Areas

GENERAL EMPLOYEE TRAINING: **Working Securely**

ENTERING AND LEAVING SECURE AREAS

When entering a staffed security post, hand your badge to the Protective Force (PF) officer. You will need to use a badge reader and possibly a hand geometry reader (commonly known as a palm reader) or PIN to enter security areas. Property Protection Areas use badge readers only.

In some security areas, you may need to pass through a metal detector. Your purse, coat, briefcase, lunchbox, and other packages may be checked by an x-ray machine or a PF officer.

If a badge reader at an entrance to a security area does not read your badge, it may mean that your security training has expired or another badge/clearance issue needs to be resolved before access is reinstated. Remember, you must keep your security training up to date.

Remember that “piggybacking” (allowing another individual with the required clearance, appropriate badge, and need-to-know to access a security area without using automated access controls, such as badge or palm readers) and “tailgating” (allowing another individual to enter a facility behind you after you swipe your badge or following someone into a security area without swiping your badge) are not allowed. Every worker must use his or her own badge to gain access to a security area.

4.24 Controlled Articles

GENERAL EMPLOYEE TRAINING: **Working Securely**

CONTROLLED PORTABLE ELECTRONIC DEVICES (PEDs) IN SECURITY AREAS

A controlled PED is a device that is easily portable and can store, read, write, record, or transmit data. Laboratory badge holders are responsible for preventing the inadvertent misuse that could result in compromise of classified or sensitive information. Examples of devices that may be Controlled PEDs include: These include the following articles:

recording equipment
(including audio, video,
optical, and
data-recording devices)

non-government-owned portable electronic
devices (including computers, personal digital
assistants, iPods, iPads, USB drives, flash memory,
medical devices, and ankle monitors)

cell phones, two-way pagers,
two-way radios, smart
watches, and radio-
transmitting equipment

fitness trackers with Bluetooth or other
connect/transmit capabilities

wireless devices

cameras (film, digital, video, or still)

In general, non-government owned Controlled PEDs are prohibited in security areas. Contact the security help line at 665-2002 or your Deployed Security Officer (DSO) if you have questions.

4.25 Countermeasures

GENERAL EMPLOYEE TRAINING: **Working Securely**

TECHNICAL SURVEILLANCE COUNTERMEASURES

Technical surveillance countermeasures (TSCM) is an electronic countermeasures program used to detect and deter espionage, protect against inadvertent disclosure of classified or sensitive information, and protect your privacy at work.

If you take LANL electronic equipment when traveling to foreign countries, you should consult with the TSCM Team before and after travel. All LANL electronics taken to sensitive foreign countries must be examined by the TSCM Team upon your return from travel. If you suspect that you are the target of a technical surveillance device, contact (preferably in person) the TSCM Team from a location away from the suspected targeted area. When requesting assistance, do not indicate the nature of the situation; simply ask to speak to a member of the TSCM Team.

4.26 Electronic Devices

GENERAL EMPLOYEE TRAINING: **Working Securely**

ELECTRONIC DEVICES USED FOR SURVEILLANCE

The following electronic devices pose a security risk if intentionally or unintentionally used as surveillance equipment:



4.27 Electronic Devices, Cont.

GENERAL EMPLOYEE TRAINING: Working Securely

ELECTRONIC DEVICES USED FOR SURVEILLANCE

Why Cellular Phones?

Unlike a traditional telephone, it is not always apparent when a cell phone is off. Because of this, cell phones can pose a threat to security. This threat is posed in four significant ways:

1

Cell phones can be carried to different locations without much awareness.

2

A cell phone maintains contact with its cellular service provider, except when the battery is removed.

3

A cell phone can be remotely activated without the user's knowledge.

4

Cell phone technology now integrates PDAs, cameras, Internet access, audio/video recording, and other capabilities controlled in secure areas.

If your job requires using a cell phone, the Laboratory will issue you one.

Blackberry and iPhone smartphones issued and configured by LANL and other government agencies with reciprocity agreements are allowed for conditional use in limited areas. If you are issued a government Blackberry or iPhone, you will receive additional training on the rules of use.

4.28 Temporary Storage

GENERAL EMPLOYEE TRAINING: **Working Securely**

TEMPORARY STORAGE OF ELECTRONIC ITEMS

Before entering a secure area, you must turn off your LANL-issued cell phone (or two-way pager) and remove its battery. Privately owned cell phones, two-way pagers, and other transmitters are prohibited in security areas without prior Office of Counter Intelligence (OCIO) approval.

Many areas have small lockers set up outside security area access points for securely storing personal electronic devices such as cell phones. Please ask at your facility about locker availability and the requirements for using them.

4.29 Substance Abuse Policy

GENERAL EMPLOYEE TRAINING: **Working Securely**

SUBSTANCE ABUSE POLICY

The Laboratory is committed to

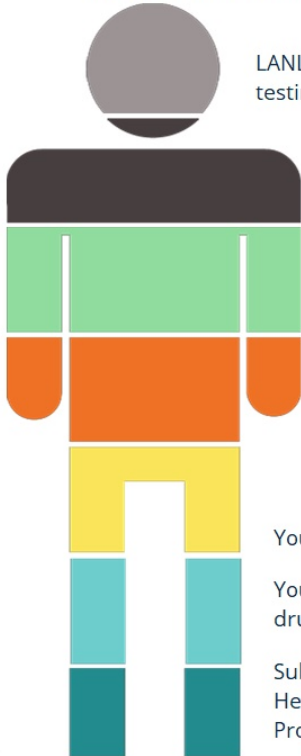


In support of this commitment, the Laboratory maintains a drug-free workplace. Substance abuse affects worker performance, conduct, and/or reliability and can interfere with the Laboratory mission. Substance abuse includes the use of illegal drugs and the misuse of alcohol or over-the-counter and prescription drugs.

4.30 Substance Abuse Policy

GENERAL EMPLOYEE TRAINING: **Working Securely**

SUBSTANCE ABUSE POLICY



LANL workers are subject to pre-employment drug testing, drug and alcohol testing that is random, based on reasonable suspicion, or post-accident.

Failure to appear for a scheduled drug and/or alcohol test is treated as a confirmed positive test.

You may not work while under the influence of alcohol or drugs.

You may not possess, sell, transfer, or use illegal drugs on Laboratory-operated property.

You may use your own legally prescribed drugs, as long as they do not affect your work. (If you are taking an over-the-counter or prescription drug that affects your ability to perform your required work, you should either notify your supervisor directly or notify OH.)

You may not bring or use alcohol on Laboratory-operated property.


You may be disciplined, up to and including termination, for abusing alcohol or drugs.

Substance-abuse counseling is available through OH. See the Occupational Health section of this handbook for information about the Employee Assistance Program (EAP).

warning (Slide Layer)


GENERAL EMPLOYEE TRAINING: **Working Securely**


SUBSTANCE ABUSE POLICY



LANL workers are subject to pre-employment drug testing, drug and alcohol testing that is random, based on reasonable suspicion, or post-accident.

Note: New Mexico has passed legislation allowing for the use of marijuana for medical purposes in certain circumstances; however, marijuana use and possession for any reason remains illegal under Federal law. **Therefore, the use, possession, and distribution of marijuana is prohibited, including any of its derivatives (e.g., CBD).**





You may be disciplined, up to and including termination, for abusing alcohol or drugs.

Substance-abuse counseling is available through OH. See the Occupational Health section of this handbook for information about the Employee Assistance Program (EAP).

4.31 Reporting Security Incidents

GENERAL EMPLOYEE TRAINING: **Working Securely**

REPORTING SECURITY INCIDENTS

You are required to immediately report any known or potential security incidents to the Security Incident Team (SIT), your DSO, and your Responsible Line Manager (RLM). Reports must be made to a person and cannot be e-mailed or left on voicemail. Ensure that potentially classified information is discussed only via secure means.

Incidents of Security Concern

Security incidents can include:

- classified information being processed on an unclassified computer
- the incorrect transmission or reproduction of classified matter
- the unauthorized or inadvertent disclosure of classified matter
- unsecured/unattended classified matter and/or container
- classified matter that is lost, stolen, or unaccounted for
- attempts to remove, divert, or obtain unauthorized access to classified matter
- unauthorized access to classified or unclassified information systems/networks
- any breach or attempted breach of a security area, access controls, or security system
- the introduction of prohibited/controlled articles into a security area
- the incorrect use of a security badge
- sabotage of LANL facilities
- known or suspected cases of technical surveillance
- and any suspicious or criminal activity.

You must also report the theft or misuse of government property. To do so, you may notify your supervisor, your division's security officer, LANL's Investigative Services Team (LIST), or the Employee Concerns Program (ECP) to report issues of waste, fraud, or abuse.

4.32 Classified Information

GENERAL EMPLOYEE TRAINING: **Working Securely**

CLASSIFIED INFORMATION

Classification is the process of identifying information that would damage national security if it were released to unauthorized persons. Classification allows for the appropriate protection of information. When classified information is improperly disclosed, some degree of damage to national security occurs on a range from serious to exceptionally grave. The extent of this damage potential is used to assign the levels of classification.

Classified matter should never be left unattended or unprotected. If you find classified matter in an inappropriate area, notify your RLM or the SIT immediately.

Classified information is given a level, as follows:

- Top secret (TS)
- Secret (S)
- Confidential (C)

Should your job require access to classified information, you will need the appropriate security clearance and a "need-to-know." Need-to-know is not simply an expedience, but the determination that a prospective recipient requires access to specific classified information to perform or assist in a lawful and authorized government function.

Before you are allowed access to classified information, you will receive more information and training. At this point, however, here are a few things to remember.

4.33 Controlled Unclassified Information

GENERAL EMPLOYEE TRAINING: **Working Securely**

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

Some information is controlled, even though it is not classified. CUI must be marked appropriately. Some types are:

- unclassified controlled nuclear information (UCNI)
- unclassified Controlled Naval Nuclear Propulsion Information (UNNPI)
- export-controlled information (ECI)
- official use only (OUO), which includes personal/privacy information, company proprietary information, and information required by law to be withheld from public release
- personally identifiable information (PII), such as social security numbers, date and place of birth, and medical and employment records

CUI, if released, could help a terrorist gain access to nuclear materials, compromise technology with military or security applications, or compromise administrative or personnel information. Many categories of CUI, when in electronic form, require data encryption when sent or carried offsite. Any known or suspected loss of PII must be reported immediately.

Your CUI Responsibilities

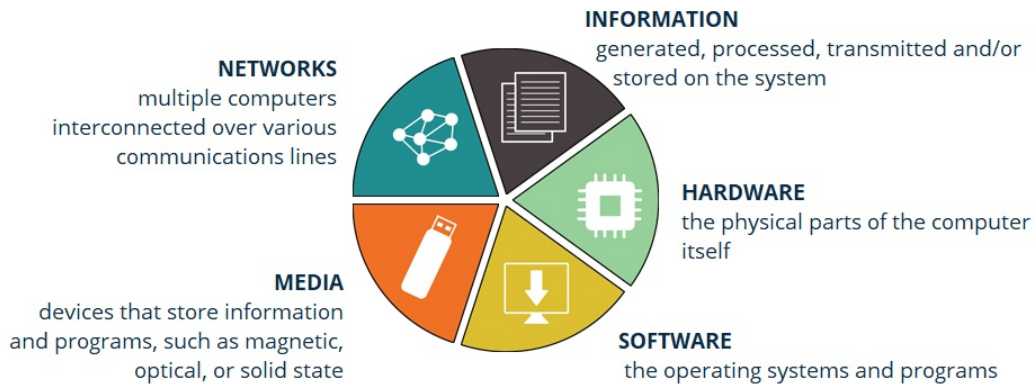
If you work with CUI, your RLM will instruct you on the proper procedures for handling it. If you find CUI in an inappropriate area, protect the information and notify your RLM immediately.

4.34 Information Security

GENERAL EMPLOYEE TRAINING: Working Securely

INFORMATION SECURITY

The goal of the information security program is to protect the confidentiality, integrity, and availability of information. The LANL Cyber Security program prevents unauthorized access, use, disclosure, disruption, modification, recording, or destruction of information. Also referred to as cyber security, information security involves



A cyber security incident is any event or threat that affects normal operations of or has an undesirable impact on a computer system and/or computing facility, such as attempted access to computing resources without authorization or contamination of an unclassified system with classified information. Incidents may also include using a computer system in connection with criminal acts, unsanctioned work, or fraud and abuse.

4.35 Untitled Slide

GENERAL EMPLOYEE TRAINING: **Working Securely**

THREATS TO CYBER SECURITY

Threats are malicious attempts to damage or disrupt a computer network or system.

Watch out for threats. They include:

- Advanced Persistent Threats
- Insider Threats
- Phishing
- Ransomware
- Commercial Espionage
- Data Manipulation
- Data Destruction
- Spyware/Malware
- Drive-By Downloads
- Unpatched, Unsupported Operating Systems and Software

4.36 Information Security Reminders

GENERAL EMPLOYEE TRAINING: **Working Securely**

INFORMATION SECURITY REMINDERS

As a Laboratory General User, you are required to participate actively in information security by following all policies and procedures (PD210-226 on the LANL Policy website) set forth by DOE and the Laboratory. When you use a Laboratory system, you agree to the terms and conditions of use, including the possibility that your system may be audited, monitored, copied, confiscated, or inspected. Here are some tips for good information security:



REMINDER1 (Slide Layer)

- 1 Observe the rules and regulations governing the secure operation and authorized use of information systems(e.g. computers).
- 2 Protect your system(s) from unauthorized access.
- 3 Follow the Laboratory password policy. Use complex passwords and never share your password or PIN.
- 4 Understand and implement required information security protections and mitigations: use anti-malware protection and perform regular backups of information that is of institutional interest.
- 5 Install only information-architecture-approved hardware and software from reputable sites. Users should request permission from their RLM to acquire software prior to purchase.
- 6 Conduct everyday computing activities-logging into your system, reading email or the web, or creating a document-using your default General User authority.
- 7 Know the classification of information you're working with, referring to P204-1 and P204-2.



NEXT >>

REMINDER2 (Slide Layer)

8

Share classified information only with those who have the proper clearance and a need to know.

9

The Laboratory protects personally identifiable information (PII). Immediately report the loss of PII to the Security Incident Team (SIT).

10

Be aware of threats to information security, such as insiders and phishing.

11

Do not download attachments or click on links in suspicious emails, which can lead to malware or ransomware being installed on your computer. Forward any suspicious email to phish@lanl.gov <<mailto:phish@lanl.gov>>.

12

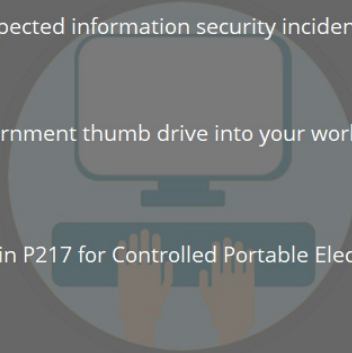
Promptly report any suspected information security incidents to SIT.

13

Do not insert a non-government thumb drive into your workstation.

14

Know the requirements in P217 for Controlled Portable Electronic Devices (PEDs).



RETURN

Untitled Layer 5 (Slide Layer)

GENERAL EMPLOYEE TRAINING: **Working Securely**

INFORMATION SECURITY REMINDERS


As a Laboratory General User, you are required to participate actively in information security by following all policies and procedures (PD210-226 on the LANL Policy website) set forth by DOE and the Laboratory. When you use a Laboratory system, you agree to

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you can continue.
Please return and view all of the content.

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Return



4.37 Reporting

GENERAL EMPLOYEE TRAINING: **Working Securely**

SEEK HELP ON INFORMATION SECURITY

If you're not sure about an action that has or will be taken, it is always best to ask for help. Options you may want to consult with for any questions include:



Organizational
Cyber Security
Representative
(OCSR)

Senior Cyber
Security
Advisor
(SCSA)

Responsible
Line Manager
(RLM)

Information
System Security
Officer (ISSO)
for a specific
system

AskIT Service
Desk
(505-665-4444)

4.38 Counterintelligence

GENERAL EMPLOYEE TRAINING: *Working Securely*

COUNTERINTELLIGENCE

The mission of the Office of Counterintelligence (OCI) is to protect LANL and its employees from efforts by foreign intelligence services and terrorist groups to acquire sensitive and classified information. OCI is responsible for these programs:

The Counterintelligence (CI) Program opposes efforts by foreign intelligence services and terrorist groups that try to recruit employees who have access to classified or sensitive information.

Foreign Visits and Assignments (FV&A) facilitates foreign national visits to the Laboratory. Non-US citizens are not permitted on LANL property without prior approval. For more information, contact the FV&A office.

Operations Security (OPSEC) is a Laboratory-wide program to ensure that sensitive information is protected from inadvertent and unauthorized disclosure.

4.39 Counterintelligence Threats and Methods

GENERAL EMPLOYEE TRAINING: Working Securely

COUNTERINTELLIGENCE THREATS AND METHODS

As a LANL employee, you could be the target of illegal or unauthorized attempts to gain access to classified or sensitive information, technology, or special nuclear material and must report any attempts to breach this security. The hostile intelligence threat is twofold:

- information obtained about classified programs can be used to damage national security and
- illegally obtained research and development technology could result in significant loss to the US.

Although intelligence agencies use many collection methods, the two methods in particular that should concern you if you work with classified or sensitive programs at the Laboratory are trained information collectors trying to elicit information from you and foreign intelligence agents trying to recruit workers in facilities or programs of interest to them.

Travel to Sensitive Countries

Any LANL workers who are planning to travel to a sensitive country for pleasure or for business must contact OCI 30 days before they leave. A current list of sensitive countries is available online from the Laboratory's homepage under OCI.

4.40 Untitled Slide

GENERAL EMPLOYEE TRAINING: **Working Securely**

COUNTERINTELLIGENCE THREATS AND METHODS

Laboratory employees are the first line of defense against these efforts.

All Laboratory badge holders are required to report the following to OCI:

- | | | | |
|----|--|----|--|
| 01 | Professional relationships with sensitive country foreign nationals | 04 | Visits and assignments by sensitive country foreign nationals |
| 02 | Substantive personal relationships with sensitive country foreign nationals | 05 | Any attempt by an unauthorized person (foreign national or U.S. citizen) to gain access to classified information |
| 03 | Substantive financial relationships with sensitive country foreign nationals | 06 | Anomalies; foreign power activity or knowledge inconsistent with the expected norm that suggests foreign knowledge of U.S. national security information, processes, or capabilities |

4.41 End Of Module

You have come to the end of
this module.

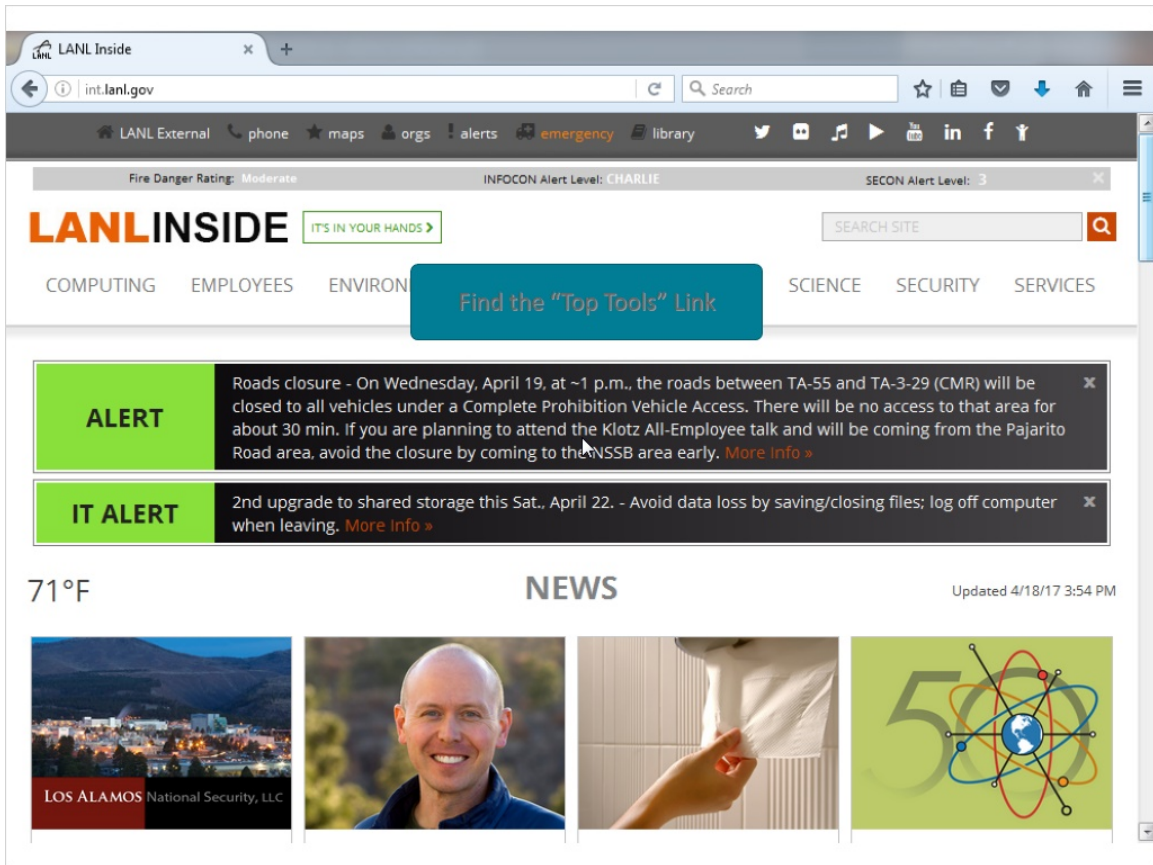
Click the “Next” button to continue to
the course menu.

5. Video Scene

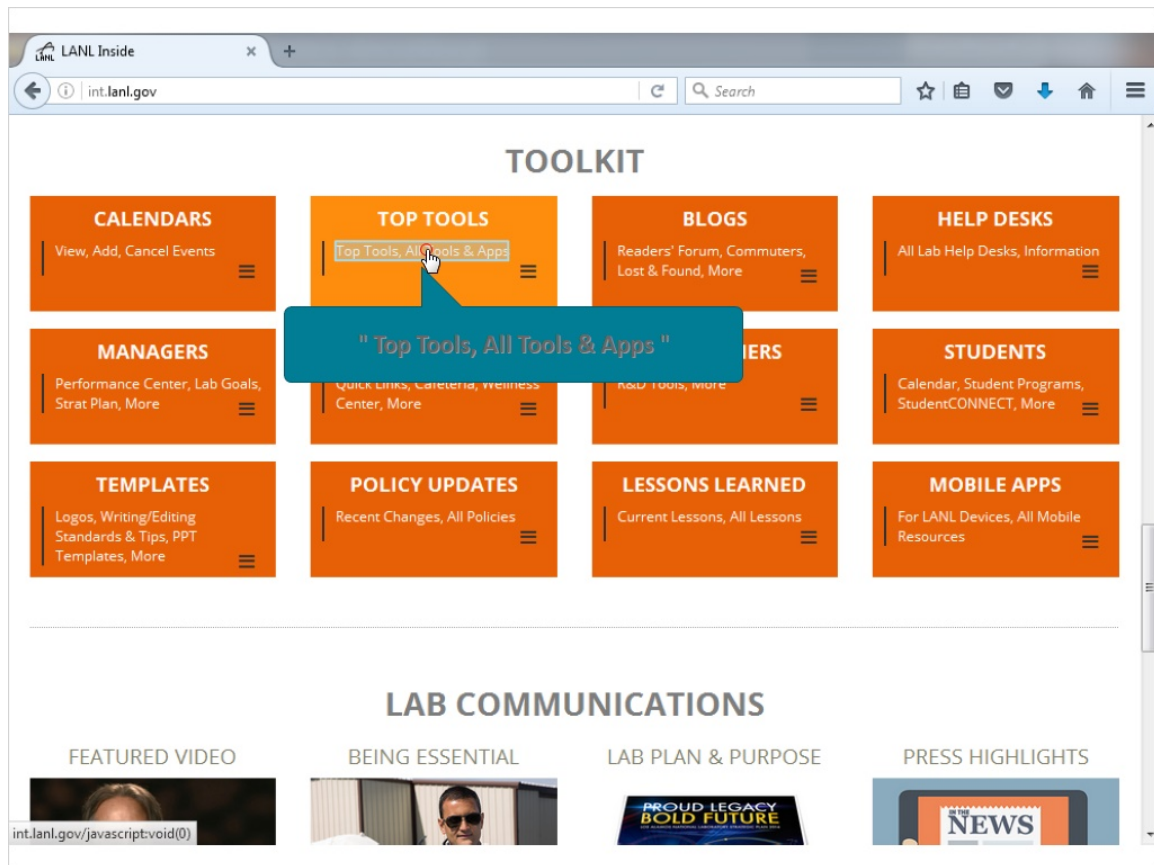
5.1 Policy Page



5.2 Scroll the mouse wheel



5.3 Click the Top Tools, All Tools & Apps link



5.4 Click the Policies link

The screenshot shows the LANL Inside website interface. The browser address bar displays 'int.lanl.gov'. The main content area is titled 'TOOLKIT' and is organized into a grid of orange boxes. The top row includes 'CALENDARS', 'TOP TOOLS', 'BLOGS', and 'HELP DESKS'. The bottom row includes 'MANAGERS', 'EMPLOYEES', 'RESEARCHERS', and 'STUDENTS'. A central white box lists 'All Tools' in three columns. A blue callout bubble with the text '" Policies"' points to the 'Policies' link in the second column of the 'All Tools' list.

TOOLKIT

CALENDARS
View, Add, Cancel Events

TOP TOOLS
Top Tools, All Tools & Apps

BLOGS
Readers' Forum, Commuters, Lost & Found, More

HELP DESKS
All Lab Help Desks, Information

All Tools »

- **Oracle: Time & Labor,** iProcurement, OBI | Citrix
- **NEW »** WQAS | More Info
- **NEW »** Spot Award | More Info
- AccessIT | Enhanced Entitlements | More Info
- Concur Travel | Travel
- DriveIT Webcams
- Electronic Document Management System (EDMS)

- Electronic Distribution
- Enterprise Warehouse
- Forms Center
- Jobs
- Kofax/Markview Invoice Approval System
- LocateIT | Building Locator
- Management Observation and Verification (MOV)
- MyMail

" Policies"

- Network Registry
- Payroll
- **Policies**
- RASSTI (get your LA-UR/LA-CP) | More info
- Training | UTrain | WQAS
- ViewIT
- Virgin Pulse: Join Now | Members
- VMS Contract Labor
- Walk It Down | Managers' Response Tool

MANAGERS
Performance Center, Lab Goals, Strat Plan, More

EMPLOYEES
Quick Links, Cafeteria, Wellness Center, More

RESEARCHERS
R&D Tools, More

STUDENTS
Calendar, Student Programs, StudentCONNECT, More

5.5 Click the Collections link

The screenshot shows a web browser window displaying the LANL Policy Office website. The browser's address bar shows the URL `int.lanl.gov/policy/index.shtml?source=toolkit`. The website features a top navigation bar with links for LANL External, phone, maps, orgs, alerts, emergency, library, and various social media icons. Below this is a secondary navigation bar with categories like Computing, Employees, Environment, Finance, News, Safety, Science, Security, and Services. The main content area is titled "Policies" and includes a sidebar with links: Policies, Collections, LANL Workers, Policy Owners, Change Management, and Archived Documents. A callout box labeled "Collections" points to the "Collections" link in the sidebar. The main content area contains a heading "Office: Policies, Procedures, Documents" and a paragraph explaining the requirements system and hierarchy. A diagram titled "LANL REQUIREMENTS SYSTEM AND HIERARCHY" shows a hierarchy starting with "Governing Policies" and "Institutional Documents". A search box for requirements and a "Submit Policy Ticket" button are also visible.

Policy Office: Policies, Procedures, Documents

int.lanl.gov/policy/index.shtml?source=toolkit

LANL External phone maps orgs alerts emergency library

LANL inside It's in your hands

Computing Employees Environment Finance News Safety Science Security Services

Policies

Policies

Collections

LANL Workers

Policy Owners

Change Management

Archived Documents

Search for Requirements

Search

Submit Policy Ticket

Questions? Need an archived document?

Office: Policies, Procedures, Documents

To help employees execute work consistently and efficiently, the Laboratory has developed a requirements system and hierarchy of policies and procedures using the [Prime Contract](#) and the Laboratory's [Governing Policies \(pdf\)](#).

The [Requirements Management System](#) identifies and documents the flow down of contractual requirements.

LANL REQUIREMENTS SYSTEM AND HIERARCHY

Governing Policies

Governing Policies (pdf)

Institutional Documents

int.lanl.gov/policy/collections/index.shtml

5.6 Click the Numerical Index link

The screenshot shows a web browser window displaying the LANL Collections page. The browser's address bar shows the URL `int.lanl.gov/policy/collections/index.shtml`. The page features a top navigation bar with links for LANL External, phone, maps, orgs, alerts, emergency, library, and various social media icons. Below this is a secondary navigation bar with categories like Computing, Employees, Environment, Finance, News, Safety, Science, Security, and Services. The main content area is titled "Collections" and includes a sidebar with links to Alphabetical Index, Numerical Index, Functional Series Documents, and Provisional Documents. A red callout box with the text "Numerical Index" points to the "Numerical Index" link in the sidebar. The main content area also lists "Related Resources" such as Appendix G, CFRs, and County Ordinances. A "Contacts" section on the right provides information about the Program Manager, Policy Office Help Desk, and Division Office Location.

LANL Collections

int.lanl.gov/policy/collections/index.shtml

LANL External phone maps orgs alerts emergency library

LANL inside It's in your hands

Computing Employees Environment Finance News Safety Science Security Services

Policies » Collections

Collections

Alphabetical Index

Numerical Index

Functional Series Documents

Provisional Documents

LANL Workers

Policy Owners

Change Management

Archived Documents

Search for Requirements

Several different ways. One, Numerically by policy number, or by Functional or Provisional Documents.

You can also search this site using the search utility in the left sidebar.

- Alphabetical Index
- Numerical Index
- Functional Documents
- Provisional Documents

Related Resources

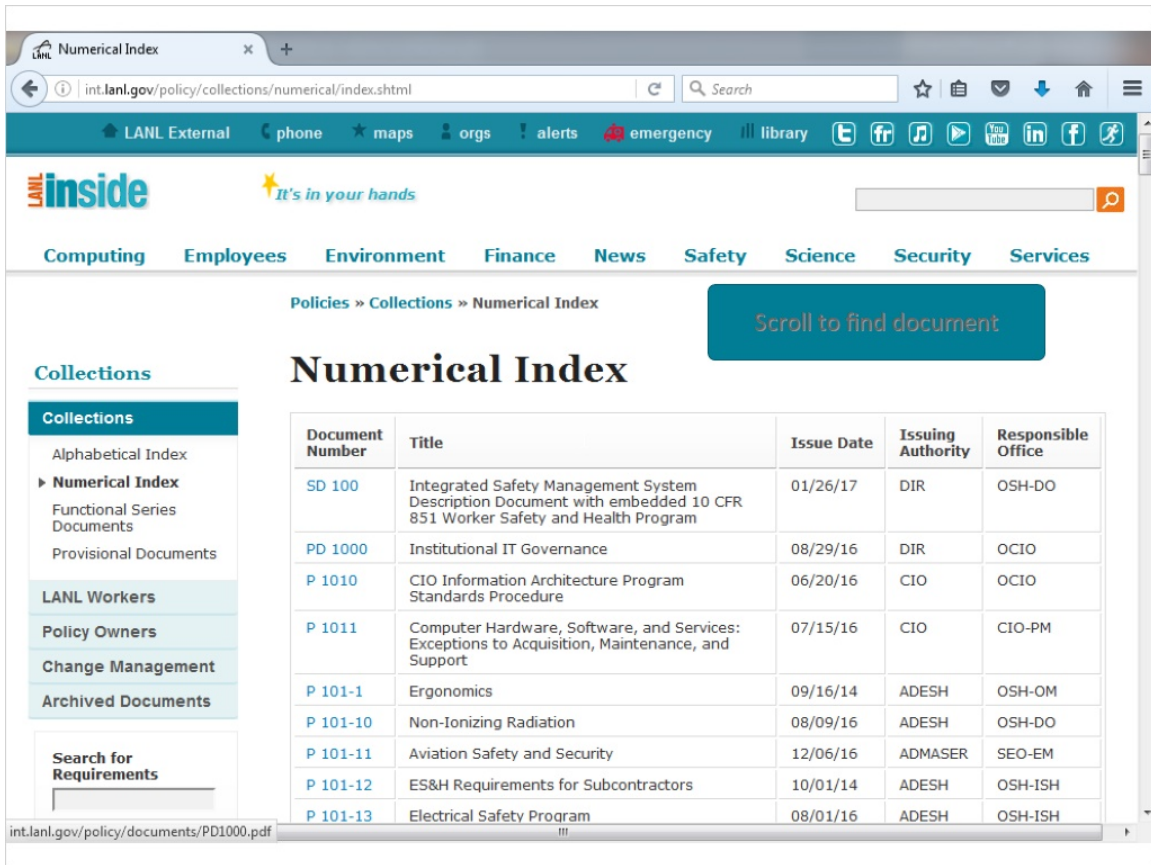
- Appendix G
- CFRs and other federal publications
- County Ordinances (Los Alamos County Code)
- LANL Directives (Policies, Orders, Manuals, and other)

Contacts

- Program Manager
Sharon S. Hickey
- Policy Office Help Desk
tel. 505-665-4965 or fax 505-665-8420
policy@lanl.gov
- Division Office Location
TA-3, Building 0261, Room E100E
Mail Stop A147
policy@lanl.gov
- Policy Points of Contact (pdf)
- Screening Committee (pdf)
- Screening Committee Calendar (pdf)

int.lanl.gov/policy/collections/numerical/index.shtml

5.7 Scroll the mouse wheel



The screenshot shows a web browser window displaying the LANL Numerical Index page. The browser's address bar shows the URL `int.lanl.gov/policy/collections/numerical/index.shtml`. The page features a navigation bar with links to various LANL services and a sidebar with a 'Collections' menu. The main content area is titled 'Numerical Index' and contains a table of documents. A blue button labeled 'Scroll to find document' is positioned above the table. The table lists documents with their IDs, titles, issue dates, issuing authorities, and responsible offices. The document IDs are highlighted in blue. The browser's status bar at the bottom shows the URL `int.lanl.gov/policy/documents/PD1000.pdf`.

Collections

- Alphabetical Index
- **Numerical Index**
- Functional Series Documents
- Provisional Documents

LANL Workers

Policy Owners

Change Management

Archived Documents

Search for Requirements

Numerical Index

Scroll to find document

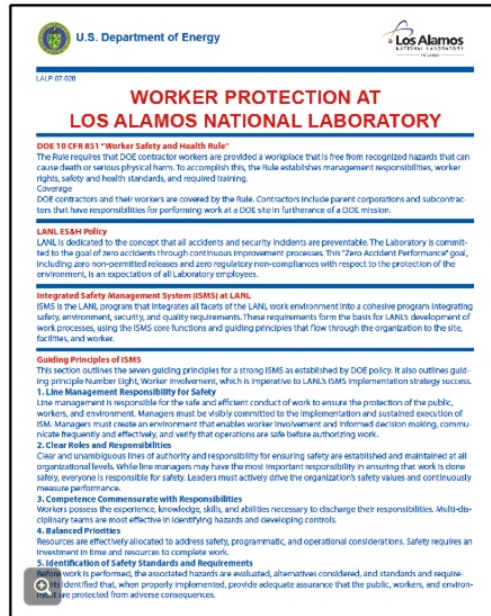
Document Number	Title	Issue Date	Issuing Authority	Responsible Office
SD 100	Integrated Safety Management System Description Document with embedded 10 CFR 851 Worker Safety and Health Program	01/26/17	DIR	OSH-DO
PD 1000	Institutional IT Governance	08/29/16	DIR	OCIO
P 1010	CIO Information Architecture Program Standards Procedure	06/20/16	CIO	OCIO
P 1011	Computer Hardware, Software, and Services: Exceptions to Acquisition, Maintenance, and Support	07/15/16	CIO	CIO-PM
P 101-1	Ergonomics	09/16/14	ADESH	OSH-OM
P 101-10	Non-Ionizing Radiation	08/09/16	ADESH	OSH-DO
P 101-11	Aviation Safety and Security	12/06/16	ADMASER	SEO-EM
P 101-12	ES&H Requirements for Subcontractors	10/01/14	ADESH	OSH-ISH
P 101-13	Electrical Safety Program	08/01/16	ADESH	OSH-ISH

int.lanl.gov/policy/documents/PD1000.pdf

6. Untitled Scene

6.1 DOE_Doc

Click on
DOE 10 CFR 851
to zoom



7. Lightboxes

7.1 Virgin Pulse

VIRGIN PULSE WELLNESS PROGRAM



Virgin Pulse is an online incentivized wellness program designed to help Laboratory employees and their non-employee spouses achieve and maintain good health and lifestyle habits. Rewards are offered for completing the Health Assessment Questionnaire and/or participating in healthy activities, including competitions, challenges, promotions, contests, health and safety classes, and lifestyle management programs.

For more information on the Virgin Pulse program, see the Laboratory website.

7.2 Regulating Agencies

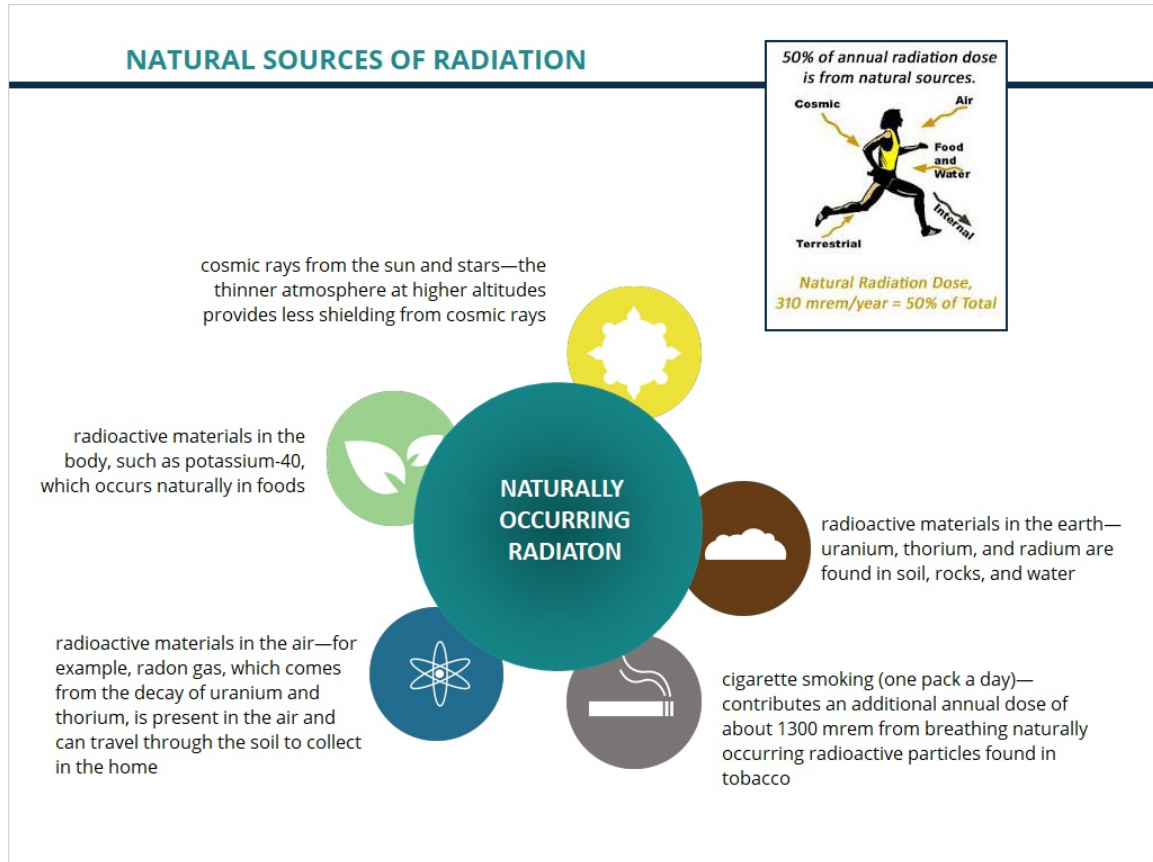
REGULATING AGENCIES

Several agencies establish the regulations, standards, and guidelines for industrial hygiene and safety programs in the workplace.

- OSHA—Occupational Safety and Health Administration (issues mandatory regulations that have the power of law). Website: <http://www.osha.gov>
- ANSI—American National Standards Institute. Website: <http://www.ansi.org>
- NIOSH—National Institute for Occupational Safety and Health. Website: <http://www.cdc.gov/niosh>
- ACGIH—American Conference of Governmental Industrial Hygienists. Website: <http://www.acgih.org>
- DOE—Department of Energy. Website: <http://energy.gov>
- NFPA—National Fire Protection Agency: <https://www.nfpa.org/>
- ASHRAE—The American Society of Heating, Refrigerating, and Air-Conditioning Engineers: <https://www.ashrae.org/>
- ASME—The American Society of Mechanical Engineers: <https://www.asme.org/>

9. Untitled Scene

9.1 Natural Radiation

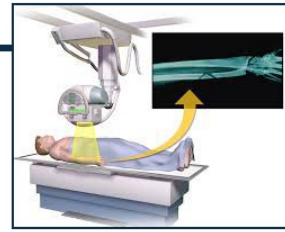


9.2 Manmade Radiation

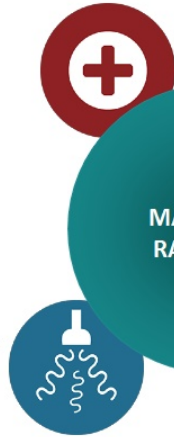
MANMADE RADIATION

Manmade background radiation comes from

medical procedures, such as dental x-rays,
diagnostic tests, and radiation therapy



radioactive industrial uses, such as
radiography or soil density meters



consumer products, such as
building materials and smoke
detectors

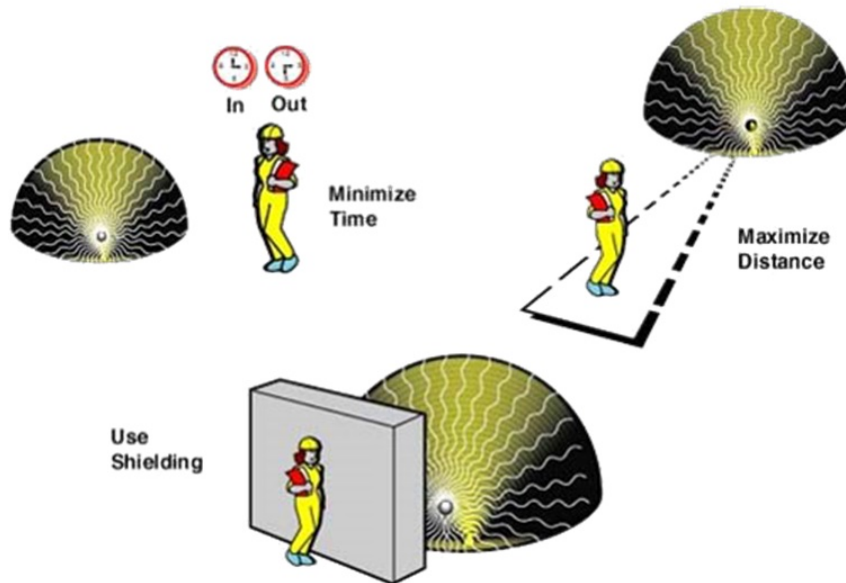
10. media

10.1 reducing external

REDUCING EXTERNAL DOSE

The external dose is reduced by the following basic protective measures:

- minimizing the time spent near the source of radiation
- maximizing the distance from the source of radiation
- using shielding between the body and the source of radiation



10.2 reducing internal dose

REDUCING INTERNAL DOSE

Your internal dose is reduced by the control methods that keep radioactive materials from entering the body through the lungs, mouth, or skin, including:

- engineering controls (gloveboxes, hoods, and ventilation systems)
- administrative controls [work control procedures, radiological work permits (RWPs), and work practices]
- PPE (coveralls, gloves, booties, hats, and respirators)



Engineering



Administrative



PPE

11. Property

11.1 Your Responsibilities

USING GOVERNMENT PROPERTY

Your Responsibilities

You may use government property, including vehicles, only for official use. To drive a government vehicle, you must possess a valid driver's license, be at least 18 years of age, and have no special driving restrictions (such as an interlock system). You are responsible for the proper use, control, and physical protection of all government property. You will be required to sign an accountability statement that lists the property-numbered items assigned to you. By signing this statement, you agree to take responsibility for the items listed on this statement.

The property administrator (PA) for your organization is available to assist you with all property-related issues, such as transporting government property only for official use. All property transported or shipped to a foreign country must be approved first by Export Control.

If government property is lost or stolen, contact your PA and the LANL Investigative Services Team within 24 hours. Loss of or damage to government property resulting from deliberate or negligent acts may result in disciplinary action, up to and including termination. Thefts and misuse of government resources are federal offenses subject to criminal prosecution and may also result in disciplinary action, up to and including termination.

11.2 Political Activities

POLITICAL ACTIVITIES

You may discuss politics at LANL, as long as the discussion does not interfere with your work and you make it clear that you are giving your opinion and not a position or policy of the Laboratory.

Your participation in political activities on your own time is your business. However, you may not campaign, solicit, or accept political contributions on LANL premises.

Employees may wear campaign buttons and discuss their political views with each other; however, overt politicking must be kept off Laboratory premises. The following are considered to be political campaigning:

- 1 handing out campaign literature, buttons, or bumper stickers for your favorite candidate or cause; and
- 2 asking other workers for campaign donations.

For more information, see P725, *Political Activities and Interactions with Elected Officials*.



11.3 Gambling

GAMBLING AT WORK

You may not gamble on Laboratory premises, nor may you use Laboratory equipment, including computers, to gamble. The following scenarios are examples of gambling:

- coordinating a football pool program at work,
- conducting or taking part in an office lottery,
- playing a card game for money during your lunch hour on LANL property, or
- selling or buying a raffle ticket (even for a good cause).

See P731, *Discipline*.

11.4 Workplace Violence

WORKPLACE VIOLENCE

Violent behavior and threats of violence are unacceptable conduct and are prohibited at the Laboratory. See P724, *Workplace Violence*, for more information. Examples of workplace violence include

- hostile or aggressive physical contact with another person,
- a statement or body gesture that threatens harm to another person, or
- any conduct that would cause a reasonable person to believe that he or she is under threat of harm.

Call 911 if you believe that immediate action is required for a life- or injury-threatening situation.

11.5 Reporting

REPORTING IMPROPER ACTIVITIES

LANS encourages workers to bring forward good-faith concerns of an improper activity or of a situation that constitutes a threat to security, health, safety, the environment, or quality and to have those concerns addressed in an independent, objective manner. LANS investigates reports of improper activities in a confidential manner to protect workers from retaliation for reporting such activities.

You may report allegations of improper activities by

- addressing workplace concerns with your manager;
- calling LANL's Employee Concerns Program (ECP) 24-hour helpline at 5-9999;
- sending an e-mail to ecp@lanl.gov;
- sending a written concern to MS D449, Attention: Helpline; or
- calling a meeting with EA-Ethics personnel, who are located at TA-00, Building 787, 125 Central Park Square, 1st floor.

See P793, *Employee Concerns*.

11.6 Harrassment

HARRASSMENT

LANL is committed to taking reasonable steps to provide a work environment that is free from all forms of harassment on the basis of sex or any other legally protected category.

Sexual harassment is unacceptable conduct and prohibited at LANL. Unwelcome sexual advances, requests for sexual favors, and other behavior or comments of a sexual nature that affect employment status or work performance or create a hostile work environment constitute sexual harassment. The display of sexually oriented visuals or images can also constitute sexual harassment and is prohibited.

The Laboratory prohibits sexual relations between a supervisor and a subordinate, regardless of whether the relationship constitutes sexual harassment or is consensual. LANL also prohibits sexual relations between a mentor and a mentee who are participants in a formal Laboratory mentorship program.

See P721, *Harassment, Including Sexual Harassment*.

11.7 Smoking

SMOKING

You may not smoke, which includes using electronic cigarettes, in government vehicles, inside Laboratory buildings, and inside offsite space leased by LANL. Smoking is also prohibited within 25 feet (horizontal and vertical) of doors, air intake vents, or operable windows of LANL buildings.

Smoking Areas

Facility Operations Directors (FODs) or other responsible line managers (RLMs) may provide designated smoking areas outside of LANL buildings or LANL-leased space.

- Designated smoking areas must be outfitted with ash receptacles and may include benches, tables, or other amenities.
- FODs may impose seasonal smoking restrictions in designated smoking areas if needed to minimize wildfire hazards.
- Smoking in areas near Laboratory-leased space or in areas occupied by LANL under other types of agreements is subject to the requirements of the property owner or landholder.
- Smoking is allowed at the Laboratory outside of buildings and in undeveloped areas, unless expressly prohibited.
- Smoking is allowed in covered parking structures, unless otherwise prohibited.
- Smokers may not dispose of embers, cigarette butts, matches, or other trash on the ground or in open water (streams, storm runoff, puddles, or landscaping features).
- Smokers may smoke in privately owned vehicles, if done in areas where smoking is not otherwise prohibited, but you may not flick ashes, embers, cigarette butts, or other smoking materials out of vehicles while at the Laboratory.

11.8 Government Property 2

MISUSING GOVERNMENT PROPERTY

The following scenarios are examples of misuse of government property or resources:

- using LANL fax machines to advertise or solicit for a private business;
- using LANL mail services for personal mail;
- using government equipment to produce mementos, such as those for birthdays and retirements;
- taking home LANL supplies or equipment that your group no longer needs;
- using LANL computers to access non-work-related sites on the Internet, including those for pornography, gambling, and private business concerns;
- making illegal copies of computer software;
- using a government vehicle for non-work-related trips; and
- using LANL e-mail or mailing lists to send inappropriate material (sexually explicit, defamatory, etc.) to others.

Employees are generally given latitude to access the Internet on an incidental basis, such as to review the news.

LANL telephones, including cell phones, are for official business use. Make personal calls only when you must, and keep them brief. Avoid making personal long-distance or international calls.

12. Measure Radiation

12.1 External Monitoring

EXTERNAL MONITORING

The thermoluminescent dosimeter (TLD) is the primary device used to measure the external radiation dose from sources outside the body. TLDs must be worn between the neck and the waist, with the LANL emblem facing away from the body. Proper care of the TLD, including its identification label, is important to prevent delays in badge processing. Other types of dosimeters may also be issued depending on the type of radiation the worker is expected to encounter.

Workers must not travel with LANL dosimeters, unless their use is authorized by Radiation Protection Programs (RP-PROG). Do not pack dosimeters that were approved for travel in checked luggage. If dosimeters are taken on travel mistakenly, notify RP-PROG promptly.

12.2 internal monitoring

INTERNAL MONITORING

An internal radiation dose from radioactive material taken into the body is measured by whole-body counting or other bioassay methods, such as urinalysis.

12.3 dose reports

RADIATION DOSE REPORTS

Annual reports of measured radiation dose are issued directly to workers who are monitored. Monthly reports for workers who wear TLDs are available in group offices. Workers can also log into the reporting system with their CRYPTOCards to view their dose report.

12.4 monitoring program

ENROLLING IN A MONITORING PROGRAM

To enroll in the appropriate monitoring program(s), go to the Safety tab on Laboratory's homepage, click Radiation Protection, select Worker Dose & Dosimetry, and follow the instructions. If you change job assignments or locations, update your dosimetry information by following the online instructions above. To be removed from these programs, contact the RP-PROG External Dosimetry Office at least one week before your departure

13. Quality Assurance Process

13.1 Introduction



13.2 Objectives

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

OBJECTIVES

What You Will Learn

When you have completed this section, you will be able to do the following:

1. State what quality means and why it is important
2. Recall that the Laboratory's Institutional Quality Assurance Program results in work that meets safety, security, operational, and customer requirements
3. List your responsibilities for quality at the Laboratory
4. Recognize important aspects of Laboratory governance and policies
5. Understand your responsibilities regarding government property

13.3 What is Quality?

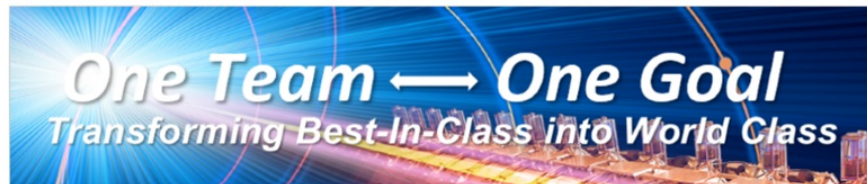
GENERAL EMPLOYEE TRAINING: **Working with Quality and Policies**

WHAT IS QUALITY?

The American Society of Quality defines quality as “a product or service free of deficiencies; conformance to requirements.” LANL defines quality as “a condition achieved when an item, service, or process meets or exceeds the user’s requirements and expectations.” Quality is meeting your customer’s requirements and expectations.

LANL has contractual requirements to ensure quality in all operations. When quality standards are not met, tragic consequences often occur to humans, wildlife, or the environment.

Quality assurance organizations at LANL provide quality management, weapons quality engineering, receipt inspection, quality assurance, project management, quality control, and independent assessment services to customers throughout the Laboratory. The Institutional Quality and Performance Assurance Division (IQPA) Division has development and oversight responsibility for implementing LANL’s Quality Assurance Program (QAP).



13.4 The Laboratory's Quality Assurance Program

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

THE LABORATORY'S QUALITY ASSURANCE PROGRAM

The Institutional QAP is the Laboratory's formal program of good practices for performing activities in a controlled manner and in accordance with technical standards and operational safety requirements. These practices are integrated in LANL's three-tiered requirements system:

- Governing Policies: high-level policies issued by the director that govern Laboratory work across the institution.
- Institutional Documents: system descriptions, program descriptions, procedures, and requirements notices issued by the Director's Office or directorates that apply to everyone in the institution or to broad cross-organizational functions.
- Local Documents: functional series documents and local instructions that define processes, operations, or other information needed to perform certain work.

The Laboratory has many different types of work activities, all of which are governed under the umbrella of the Laboratory's QAP defined in SD330 LANL Quality Assurance Program. In addition to the Institutional QAP, these activities can have specialized sub-tier, documented quality programs, including research and development, weapons design and manufacturing, engineering, and construction.

13.5 Quality Assurance Program

GENERAL EMPLOYEE TRAINING: **Working with Quality and Policies**

QUALITY ASSURANCE PROGRAM

HOW IS QUALITY MANAGED?

HOW IS QUALITY MANAGED?

Quality is managed at the Laboratory by

- planning work to ensure it is performed by qualified workers using approved processes, codes, and standards to achieve the specified product;
- conducting work only after risks to workers, the public, and the environment are formally analyzed and the risks are reduced, as practical;
- reporting abnormal events and occurrences; and
- assessing work processes and results to improve process effectiveness and product quality.

This process is shown in the Integrated Safety Management (ISM) cycle taught in the Laboratory's safety and security classes.

WHAT IS IMPORTANT?

YOUR RESPONSIBILITIES

COUNTERFEIT/DEFECTIVE

13.6 Quality Assurance Program

GENERAL EMPLOYEE TRAINING: **Working with Quality and Policies**

QUALITY ASSURANCE PROGRAM

HOW IS QUALITY MANAGED?

WHAT IS IMPORTANT?

WHAT IS IMPORTANT IN MANAGING QUALITY?

Important criteria in the management of quality at the Laboratory include

- the clear identification of roles, responsibilities, and interfaces;
- workers who are trained and qualified;
- the timely identification and correction of problems;
- the use of current resource documents and well-maintained records;
- the implementation of work policies, plans, and procedures;
- clearly specified design requirements;
- the effective communication of requirements to suppliers;
- the requirement of inspections, tests, and verification documents;
- the management evaluation of progress against objectives;
- the conducting of audits and assessments to ensure compliance; and
- the evaluation, characterization, and management of software to ensure compliance.

YOUR RESPONSIBILITIES

COUNTERFEIT/DEFECTIVE

13.7 Quality Assurance Program

GENERAL EMPLOYEE TRAINING: **Working with Quality and Policies**

QUALITY ASSURANCE PROGRAM

HOW IS QUALITY MANAGED?

WHAT IS IMPORTANT?

YOUR RESPONSIBILITIES

WHAT ARE YOUR RESPONSIBILITIES?

The success of the Institutional QAP depends on you. Although the Institutional Quality Group (QPA-IQ) provides you with tools and support, quality is actually your job. As a Laboratory worker, you must

- complete training required to perform your work;
- analyze and manage hazards and risks in your daily work;
- follow policies, plans, and procedures approved by your management;
- assess your work processes and products to promote improvement; and
- have a questioning attitude. If you see something that may not meet quality requirements, bring it to the attention of your management.

For more information, see the Quality Services website under the Service tab of the Laboratory's home page.

COUNTERFEIT/DEFECTIVE

13.8 Quality Assurance Program

GENERAL EMPLOYEE TRAINING: Working with Quality and Policies

QUALITY ASSURANCE PROGRAM

HOW IS QUALITY MANAGED?

WHAT IS IMPORTANT?

YOUR RESPONSIBILITIES

COUNTERFEIT/DEFECTIVE

SUSPECT A COUNTERFEIT OR DEFECTIVE ITEM?

Suspect/counterfeit items (S/CI) pose immediate and potential threats to the safety of DOE and contractor workers, the public, and the environment. Failure of a safety system due to an S/CI could have security implications at DOE facilities. Counterfeit parts used in a system can injure or kill when the components or systems fail as a result of the use of counterfeit materials. Fortunately, no major accidents or any loss of life have resulted from S/CIs within the DOE Complex. However, over the years S/CIs are known to have entered the procurement system(s) at DOE sites. Left unidentified and uncorrected, these items present potential risks.

The immediate identification and reporting of S/CI is critical because S/CI not only negatively impacts safety, but it can damage the economy by victimizing legitimate manufacturers and suppliers. At the very least, S/CIs cause a loss of customer confidence and compounds product liability issues and adjudication.

If in the course of your job you suspect you have a counterfeit or defective item, you should:

- Stop what you are doing and do not use the item in question. Collect the item and any similar items and segregate them.
- Contact your line manager and let him/her know you have a suspect/counterfeit item.
- Contact the S/CI Coordinator or the S/CI Help Desk to report the issue.

13.9 Governance and Policy

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

GOVERNANCE AND POLICIES

The Laboratory operates under a federal management and operations contract with the DOE/NNSA called the Prime Contract. The contract is performance-based, with mission deliverables and operational requirements. A Requirements Management System (<https://rms.lanl.gov/RMS>) identifies and documents the down flow of contractual requirements from the Governing Policies mentioned earlier in this module. The Laboratory has developed a requirements system and hierarchy of institutional documents to help employees execute work consistently and efficiently. These institutional documents include system descriptions (SDs), program descriptions (PDs), and procedures. LANL's policies and procedures can be found on the Policy Office link of LANL's home page.

In the next few screens, we will talk about some of the Laboratory's policies that might affect you. LANL employment policies generally do not apply to contract workers. If you are a contract worker, you should talk to your employer for information about the terms and conditions of your contract.

13.10 Governance and Policy

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

GOVERNANCE AND POLICIES

NONDISCRIMINATION & EQUAL OPPORTUNITY

NONDISCRIMINATION & EQUAL OPPORTUNITY

LANL does not engage in the discrimination against or harassment of any person employed by or seeking employment with the Laboratory on the basis of race; color; national origin; ancestry; religion; age; sex; gender identity; sexual orientation or preference; marital status or spousal affiliation; physical or mental disability; medical conditions [including, but not limited to HIV/AIDS, cancer-related illnesses, and illnesses resulting from genetic characteristics]; pregnancy (including childbirth and medical conditions related to pregnancy and childbirth); status as a disabled veteran, recently separated veteran, other protected veteran, or Armed Forces service medal veteran; genetic information with respect to applicant or employee; and citizenship within the limits imposed by federal laws or regulations.

Equal employment opportunity and nondiscrimination applies to all Laboratory employment practices, including recruitment, selection, promotion, transfer, merit increase, salary management, training and development, and separation.

Because harassment keeps workers from working to their full potential, it will not be tolerated. Anyone engaging in harassment at LANL can lose their job.

MANAGING DIVERSITY

CONFLICT OF INTEREST

GIFTS, ENTERTAINMENT, FAVORS & KICKBACKS

PRIVILEGED INFORMATION

13.11 Governance and Policy

GENERAL EMPLOYEE TRAINING: Working with Quality and Policies

GOVERNANCE AND POLICIES

NONDISCRIMINATION & EQUAL OPPORTUNITY

MANAGING DIVERSITY

MANAGING DIVERSITY

LANL is committed to creating and maintaining a work environment in which all employees can reach their full potential while pursuing the Laboratory's mission and objectives. For more information about LANL's diversity policy, contact the Human Resources Office of Diversity and Strategic Staffing (HR-ODSS) at odss@lanl.gov.

Affirmative Action

LANL is committed to applying good-faith efforts to achieve the prompt and full use of minorities, women, persons with disabilities, and covered veterans in all segments of the workforce. These efforts conform to current legal and regulatory requirements and are consistent with LANL standards for quality and excellence.

For questions about nondiscrimination, equal opportunity, or affirmative action, refer to PD712, *Equal Employment Opportunity, Affirmative Action, and Diversity*.

CONFLICT OF INTEREST

GIFTS, ENTERTAINMENT, FAVORS & KICKBACKS

PRIVILEGED INFORMATION

13.12 Governance and Policy

GENERAL EMPLOYEE TRAINING: Working with Quality and Policies

GOVERNANCE AND POLICIES

NONDISCRIMINATION & EQUAL OPPORTUNITY

MANAGING DIVERSITY

CONFLICT OF INTEREST

CONFLICT OF INTEREST

LANL seeks to avoid conflict-of-interest situations whenever possible. These situations may involve either an actual conflict of interest or the appearance of one. See PD801, *Ethics Program*; P832-1, *Conflict of Interest: Technology Transfer*; and P723, *Conflicts of Interest*. For more information, see the Quality Services website under the Service tab of the Laboratory's home page.

Outside Employment

If you plan to work at another job while employed at the Laboratory or during a leave of absence, you must have your group leader and your division leader's approval. Some restrictions may be required to avoid a conflict of interest. You may not participate in outside employment if a conflict of interest exists or appears to exist.

Example

John wants to teach a physics course for a local university. Before he may begin teaching, he must complete Form 701, Outside Activity Permission Request, to get approval from his group- and division-level managers and LANL's conflict of interest officer. If teaching does not interfere with his LANL job and no conflict of interest exists, approval may be given.

To help demonstrate compliance with requirements and to uphold the highest level of ethical standards, each LANL employee is required to complete and submit a Conflict of Interest Certificate (Form 1990).

GIFTS, ENTERTAINMENT, FAVORS & KICKBACKS

PRIVILEGED INFORMATION

13.13 Governance and Policy

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

GOVERNANCE AND POLICIES

NONDISCRIMINATION & EQUAL OPPORTUNITY

MANAGING DIVERSITY

CONFLICT OF INTEREST

GIFTS, ENTERTAINMENT, FAVORS & KICKBACKS

GIFTS, ENTERTAINMENT, FAVORS, & KICKBACKS

You must not solicit or accept a gift, entertainment, favor, gratuity, loan, or other item of value because of your position at the Laboratory, nor should you offer anyone a gift on a similar basis. However, you may accept unsolicited advertising novelties or ordinary business courtesies, such as a modest business lunch.

Example

A computer company wants to send Julie, a manager, a complimentary laptop computer in the hope that she will favor the company for future purchases. Julie may not accept the equipment.

See P722, *Business Gifts and Gratuities*, and P815, *Allowable Costs*.

PRIVILEGED INFORMATION

13.14 Governance and Policy

GENERAL EMPLOYEE TRAINING: Working with Quality and Policies

GOVERNANCE AND POLICIES

NONDISCRIMINATION & EQUAL OPPORTUNITY

MANAGING DIVERSITY

CONFLICT OF INTEREST

GIFTS, ENTERTAINMENT, FAVORS & KICKBACKS

PRIVILEGED INFORMATION

PRIVILEGED INFORMATION

You may not use proprietary data or privileged information obtained through LANL employment for personal purposes, for favoritism in purchasing goods or services, or in any other unauthorized manner.

Example

Marie owns stock in a laser company that supplies equipment to LANL. She knows that her group is planning to buy many expensive lasers for a new project. She releases technical information that gives the company a favored position in the bidding process. Marie has used privileged information for personal gain.

Contracts

LANL employees must follow specific policies and procedures when procuring or purchasing goods or services. To obtain goods or services from an outside supplier, call or e-mail the Acquisition Services Management Division for advice on how to process a purchase request through procurement. You may contact a Procurement Help Desk (PHD) representative at phdhelp@lanl.gov. Questions about the use of purchase cards and LANL's Purchase Card Program may also be directed to the PHD.

13.15 Using Government Property

GENERAL EMPLOYEE TRAINING: *Working with Quality and Policies*

USING GOVERNMENT PROPERTY

All Laboratory facilities, grounds, supplies, and equipment, including surplus or salvage material, are US government property and subject to federal laws and contract provisions that regulate their use and protection. See P821, *Government Personal Property*, and P821-3, *Private Personal Property*.

CLICK TO READ EACH SECTION

Your Responsibilities

Smoking

Misusing Government
Property

Workplace Violence

Political Activities

Harassment

Gambling at Work

Reporting Improper
Activities

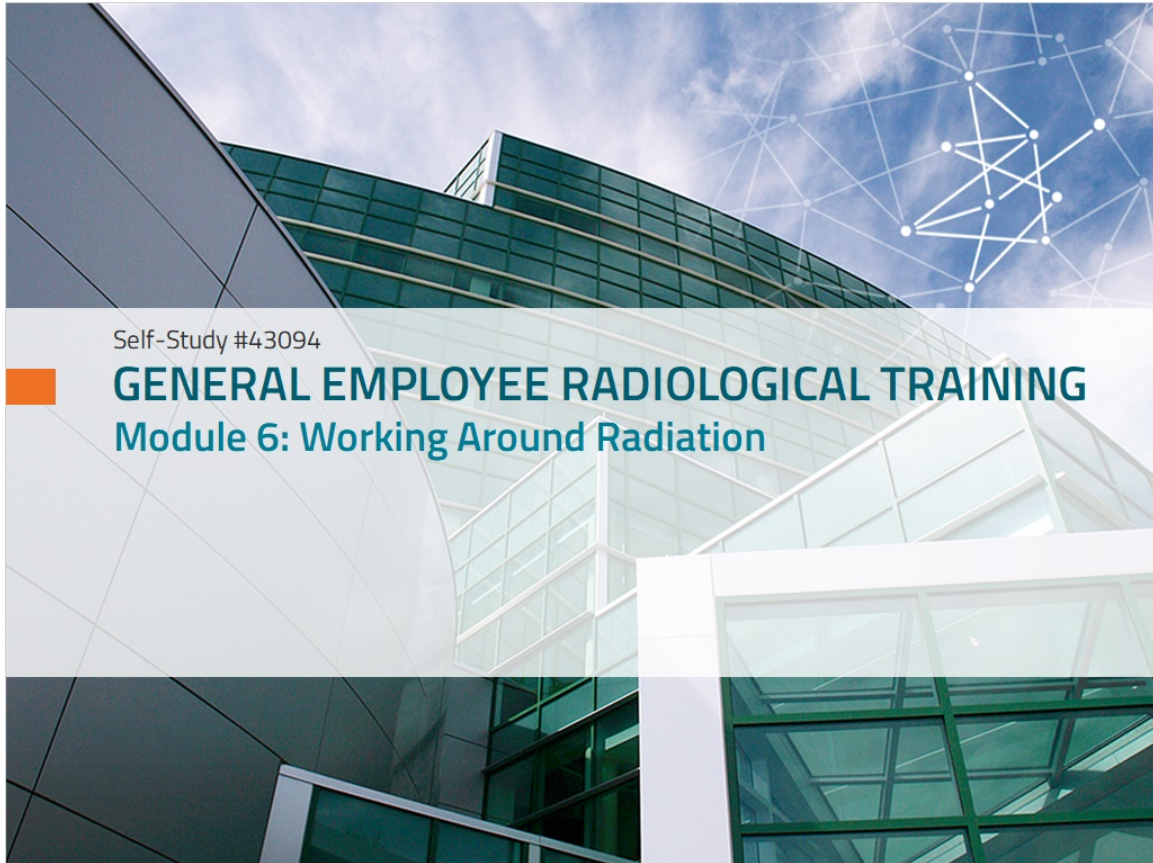
13.16 Course Completion

You have come to the end of
this module.

Click the “Next” button to return to
the course menu.

14. Working around Radiation

14.1 Introduction



14.2 Objectives

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): **Working Around Radiation**

OBJECTIVES

What You Will Learn

When you have completed this section, you will be able to do the following:

1. Distinguish between different sources of background ionizing radiation
2. Recognize the biological effects of ionizing radiation and the risks of exposure
3. Demonstrate knowledge of how to declare a pregnancy to appropriate parties in the Laboratory
4. Name radiation dose limits per year for occupational exposure
5. Recall the two methods used to monitor workers' radiation doses at the Laboratory
6. Repeat the as-low-as-reasonably-achievable (ALARA) concept and the ways you can decrease your radiation dose
7. Recognize and interpret the different radiological controls and postings within the Laboratory
8. List managers' and workers' responsibilities for radiological protection
9. Employ emergency procedure information for your facility and area

14.3 Atoms, Isotopes, and Decay

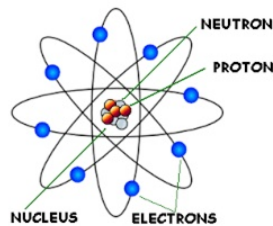
GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

ATOMS, ISOTOPES, AND DECAY

ATOMS

ATOMS

The fundamental unit of all matter in the universe is the atom. Atoms contain three basic parts, called particles. These subatomic particles include protons, neutrons, and electrons. Neutrons determine the nuclear properties of an element, whereas electrons determine its chemical properties.



ISOTOPES

DECAY

14.4 Atoms, Isotopes, and Decay

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

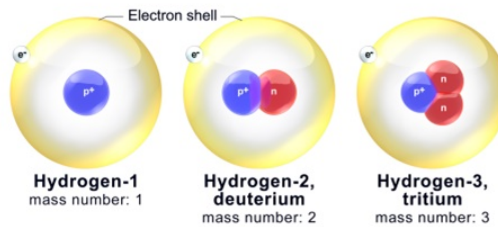
ATOMS, ISOTOPES, AND DECAY

ATOMS

ISOTOPES

ISOTOPES

Isotopes are two or more forms of the same element that contain equal numbers of protons but different numbers of neutrons. These too can have stable or unstable (radioactive) forms. As a result, isotopes do not differ from the element in their chemical properties but are different nuclear forms of an element.



DECAY

14.5 Atoms, Isotopes, and Decay

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

ATOMS, ISOTOPES, AND DECAY

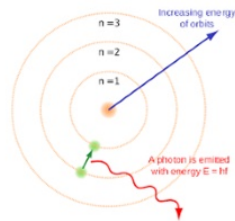
ATOMS

ISOTOPES

DECAY

DECAY

Although certain combinations of neutrons and protons result in a stable atom, too many or too few neutrons for a given number of protons result in an unstable (or radioactive) atom. These radioactive atoms can be either naturally occurring or manmade. In trying to become a stable atom, an unstable atom will release energy. This release of energy in the form of particles or waves is called radiation. This process, or capability, of certain atoms to emit radiation as they decay is called radioactivity.



14.6 Radiation

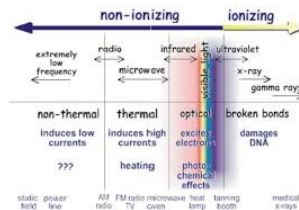
GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

RADIATION

For the purposes of this training, the two general forms of radiation are ionizing and nonionizing.

Ionization is the process of changing the number of electrons associated with an atom, resulting in a charged atom called an ion. Ionizing radiation contains enough energy to ionize, or create charged atoms. Examples of ionizing radiation include alpha, beta, neutron, and gamma or x-ray.

Nonionizing radiation does not contain enough energy to strip electrons from atoms. Examples of nonionizing radiation include visible light, radio waves, and microwaves. In this training we are concerned almost exclusively with ionizing radiation.



14.7 Radiation, Cont.

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

RADIATION, cont.

The amount of energy from ionizing radiation that a person absorbs from radiation sources is called a radiation dose. This dose can be measured using radiation dosimetry and is reported in terms of rems or millirems (mrems), which is the unit of measurement that considers the biological damage to the human body.

Ionizing radiation is present at the Laboratory as both generated and background radiation. Generated radiation is energy in the form of particles or waves from artificial or natural sources that can be used in research applications. Common sources of radiation at the Laboratory include radioactive materials and particle accelerators used in national security, medical, and scientific research activities.

14.8 Background Radiation

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

BACKGROUND (NON-WORK RELATED) RADIATION

Non-work related radiation is both naturally occurring and manmade in the environment. The average US nationwide dose from background radiation is about 620 mrem per year. In Los Alamos, the non-work-related dose averages about 700 mrem per year, mostly because of the high altitude and naturally-occurring radon levels.

[click to learn more about sources below](#)



NATURAL
SOURCES

MANMADE
SOURCES

14.9 Untitled Slide

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.

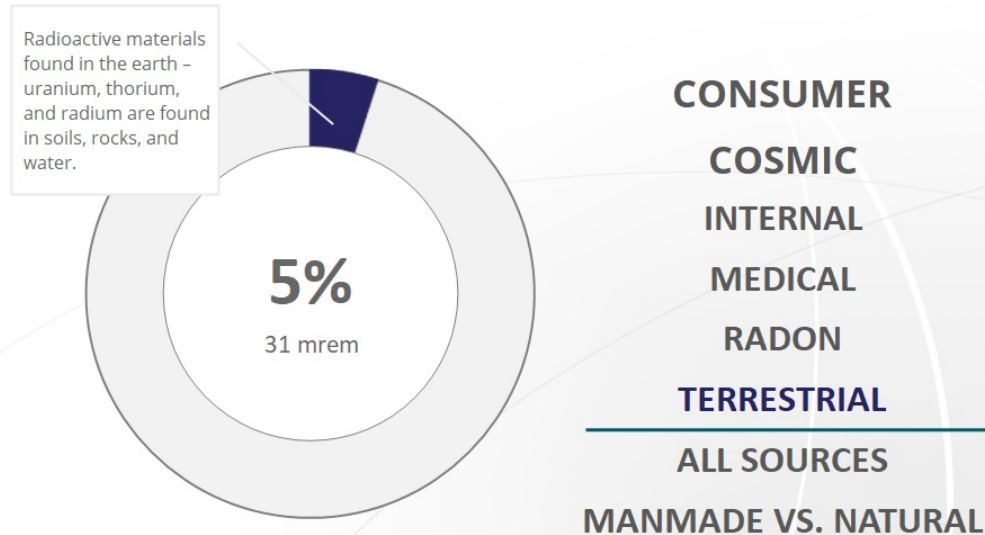


TERRESTRIAL (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.

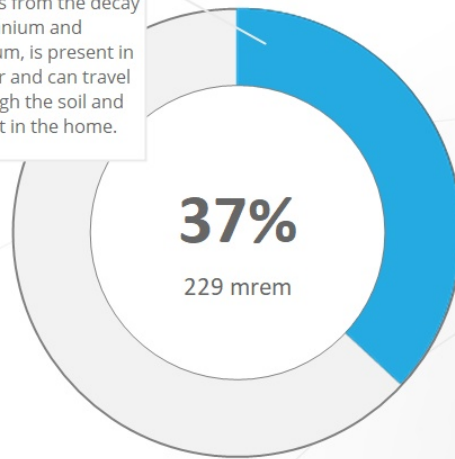


RADON (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.

Radon gas, which comes from the decay of uranium and thorium, is present in the air and can travel through the soil and collect in the home.



CONSUMER

COSMIC

INTERNAL

MEDICAL

RADON

TERRESTRIAL

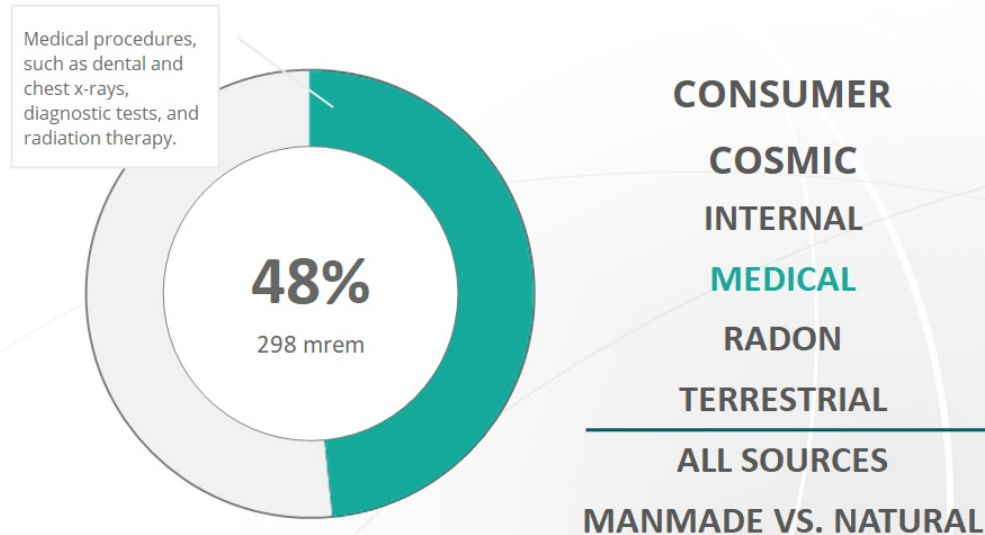
ALL SOURCES

MANMADE VS. NATURAL

MEDICAL (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

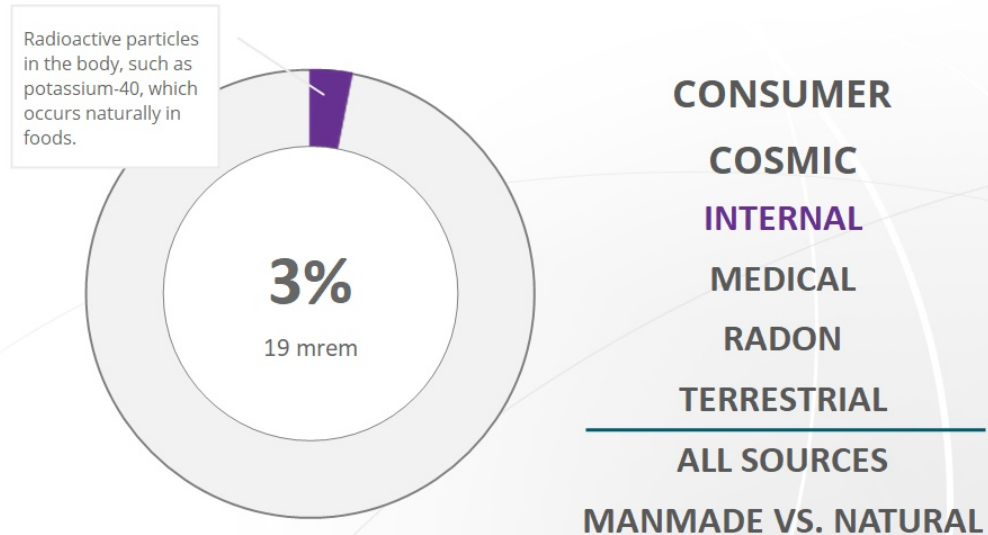
What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.



INTERNAL (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

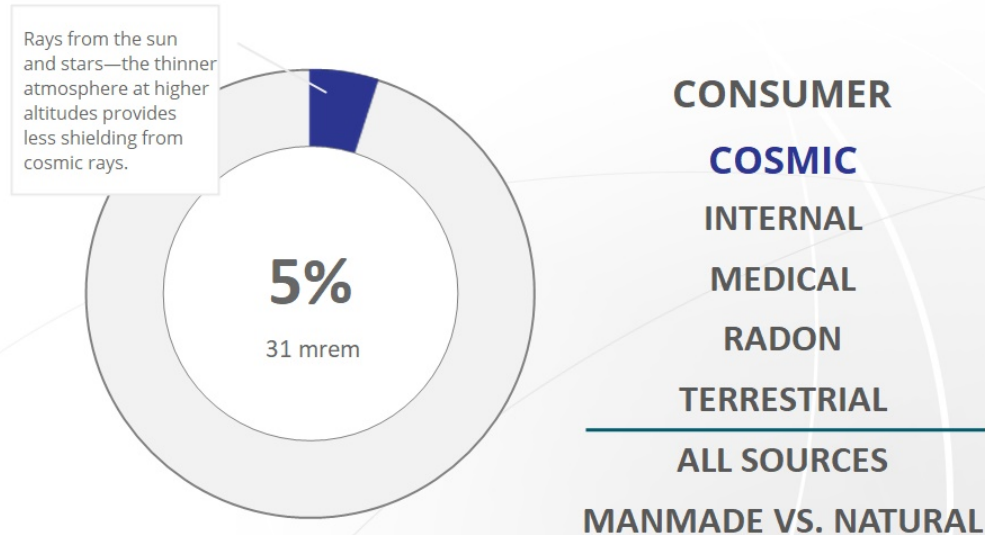
What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.



COSMIC (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.

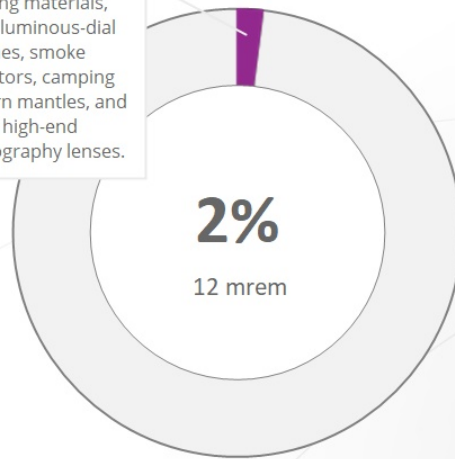


CONSUMER (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.

Examples include:
building materials,
older luminous-dial
watches, smoke
detectors, camping
lantern mantles, and
some high-end
photography lenses.



CONSUMER

COSMIC

INTERNAL

MEDICAL

RADON

TERRESTRIAL

ALL SOURCES

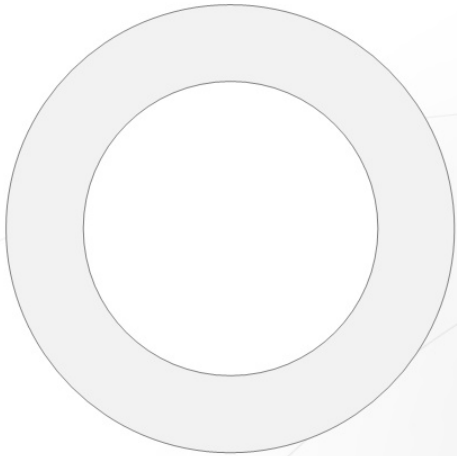
MANMADE VS. NATURAL

base (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.



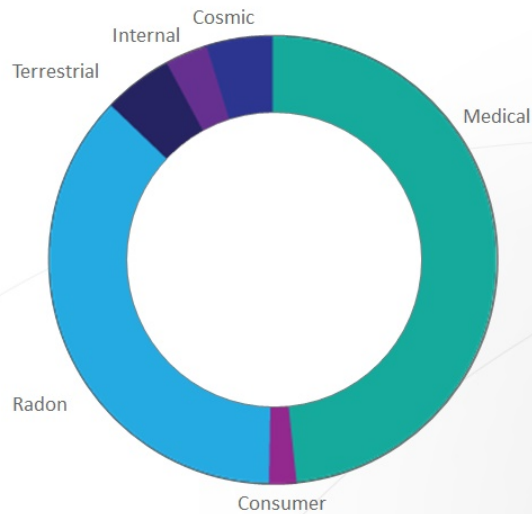
CONSUMER
COSMIC
INTERNAL
MEDICAL
RADON
TERRESTRIAL

ALL SOURCES
MANMADE VS. NATURAL

WHOLETHING (Slide Layer)

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation BACKGROUND (NON-WORK RELATED) RADIATION

What do you think is the greatest contributor to the average annual dose of background radiation? Click on each category to learn how much these sources contribute.



CONSUMER

COSMIC

INTERNAL

MEDICAL

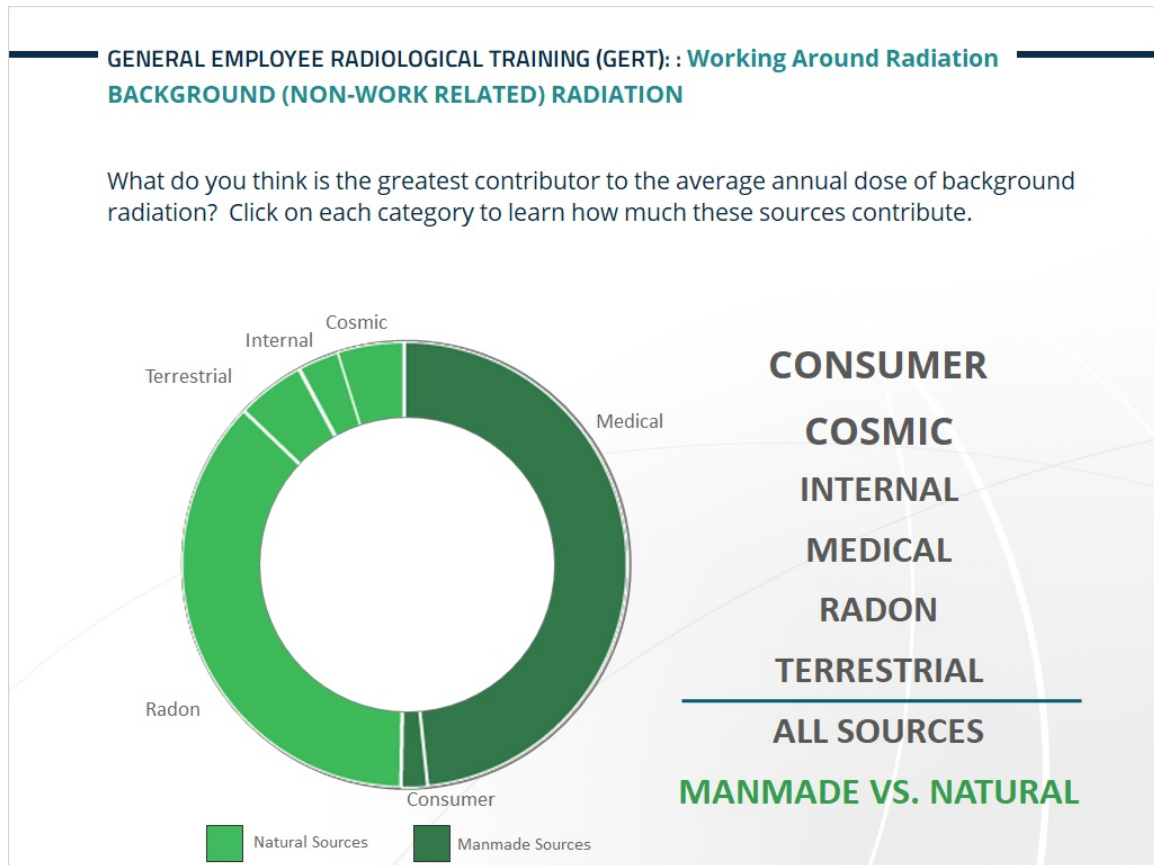
RADON

TERRESTRIAL

ALL SOURCES

MANMADE VS. NATURAL

VS (Slide Layer)



14.10 Radiation Exposure

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

Exposure

Click on the items to the left to learn more about exposure.

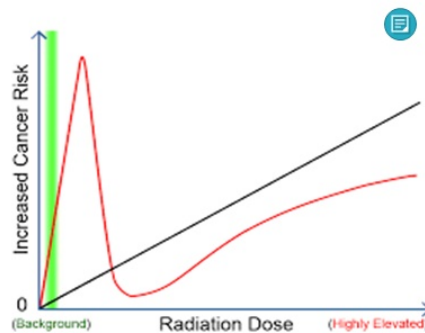
Exposure (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

Radiation Exposure

Exposure to ionizing radiation can be hazardous to human health. The ionization of atoms in a human cell can cause chemical changes within the body, including cell damage. At low doses, cells may repair the damage with no lasting effects. If the damage is great enough, the cell will die. Damage to the cell's nucleus can alter the cell's chromosomes, with possible mutations of the cells.

Radiation effects that appear in the exposed person are called somatic effects. Any effects that appear in the descendants of the exposed person are called heritable effects.



causes-2 (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

Causes of Radiation Exposure

External exposure to radiation alone does not result in contamination. Radiation is ionizing energy, whereas contamination is loss of control of a material that emits radiation. For example, you do not become contaminated with external exposure to x-rays.

Radiation is like the heat you feel from a campfire; contamination is like the glowing embers from the campfire landing on your clothes.



Radioactive contamination at LANL is radioactive material in an undesirable or non-contained location, such as outside the glovebox or hood in which the material is being handled; in homes or offices; or in the soil, air, or other areas of the environment. Any contained radioactive material, although it emits radiation, is not contamination.

types-3 (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

Types of Exposure

Acute exposure occurs when a dose of radiation is received in a short period, typically from seconds to days. An acute, high-level dose causes physical effects because the body cannot repair or replace cells fast enough. Most effects from acute, high-level exposure appear within minutes to weeks, depending on the dose received. Examples of acute, high-level exposure are:

- the localized dose received during medical radiation therapy, and
- the whole-body dose received by atomic bomb survivors.

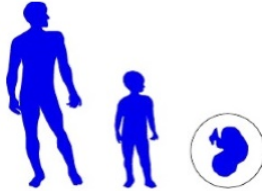
Chronic exposure occurs when a dose of radiation is received over a long period, typically from months to years. A chronic, low-level dose is usually less harmful than an acute dose because the body has time to repair or replace damaged cells. The effects, if any, of chronic low-level exposure may not appear until years after exposure. Examples of chronic low-level exposure are the dose received from background radiation and the dose typically received from occupational exposure.

A somatic effect from chronic low-level exposure may be a slight increase in the risk of developing cancer. The exact increase in the risk of cancer is not known. The increase in risk at occupational levels of exposure is too small to measure and must be estimated based on individuals who have received very high exposures.

prenatal-4 (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure


Prenatal Effects of Exposure



The embryo/fetus is especially sensitive to radiation because its cells are dividing rapidly. The degree and kind of radiation damage are dependent on the stage of development of the embryo.

High doses of radiation can result in miscarriage, a low birth weight, mental retardation, birth defects, and an increased risk of developing cancer and other diseases.

Because the effects of low doses of radiation are not precisely known, it is wise to avoid any unnecessary radiation exposure during pregnancy.

Reporting a Pregnancy 

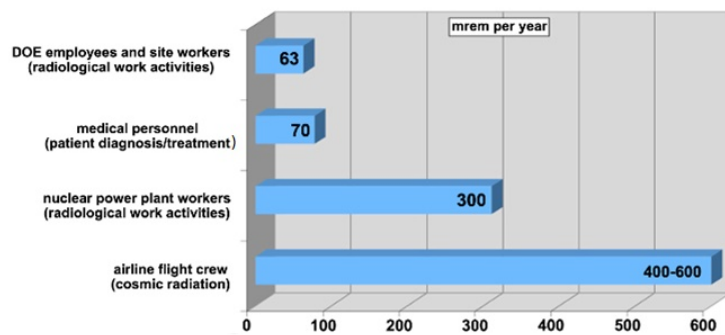
occupational-5 (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

Comparing Occupational Exposures

An average radiation dose received from occupational exposure by DOE employees and site workers is about 63 mrem per year. The following chart compares this amount with the average radiation doses received by workers in other occupations.

These work-related doses are calculated in addition to background radiation doses.



dose-limits-6 (Slide Layer)

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

DOE Radiation Dose Limits

The DOE sets limits on the maximum radiation dose that workers, visitors, and the public are allowed to receive in a given period as a result of exposure from DOE sites.

Radiation dose limits, as set forth in 10 CFR 835, are based on guidance from the International Commission on Radiological Protection, the National Council on Radiation Protection and Measurement, and the Environmental Protection Agency (EPA).

The DOE's annual radiation dose limits are listed in the following chart. These limits are calculated in addition to background radiation doses and include both external and internal doses.

DOE Annual Radiation Dose Limits		
	rem per year	mrem per year
Radiological Workers	5	5000
Embryo/Fetus	0.5 (term of pregnancy)	500 (term of pregnancy)
Visitors and the Public	0.1	100

Measure (Slide Layer)

The slide layer consists of a dark blue sidebar on the left and a white main content area on the right. The sidebar contains a vertical list of seven items, each with a white circular bullet point and yellow text. The first item, 'Radiation Exposure', is highlighted with a white dot. The main content area has a title 'How We Measure Radiation Exposure' in bold dark blue. Below the title is a paragraph of text in dark blue. Underneath the paragraph is a red link 'click each box to learn more'. Below the link are four dark grey rectangular buttons with white text, stacked vertically. The buttons are: 'External Monitoring', 'Internal Monitoring', 'Radiation Dose Reports', and 'Enrolling in a Monitoring Program'.

- Radiation Exposure
- Causes of Radiation Exposure
- Types of Exposure
- Prenatal Effects of Exposure
- Comparing Occupational Exposures
- DOE Radiation Dose Limits
- How We Measure Radiation Exposure

How We Measure Radiation Exposure

At the Laboratory, special detection and dosimetry devices are used to detect radiation and radioactive material. If you work on, with, or near radioactive material or radiation-generating devices, you must be monitored to determine the radiation dose you have received in the workplace.

[click each box to learn more](#)

External Monitoring

Internal Monitoring

Radiation Dose Reports

Enrolling in a Monitoring Program

<ul style="list-style-type: none">● Radiation Exposure● Causes of Radiation Exposure● Types of Exposure● Prenatal Effects of Exposure● Comparing Occupational Exposures● DOE Radiation Dose Limits● How We Measure Radiation Exposure	<h2>Prenatal Effects of Exposure</h2> <p>REPORTING A PREGNANCY:</p> <p>If you are pregnant or are considering becoming pregnant and could be exposed to radiation in the workplace, you are encouraged to notify Occupational Health (OH) in writing. This declaration is voluntary and may be revoked in writing any time by the declared pregnant worker.</p> <p>Once a female worker submits a written declaration of pregnancy with OH, she is considered to be a declared pregnant worker. The Reproductive Health Assistance Program (RHAP) will evaluate your work situation to determine if your job tasks must be modified to minimize exposure and will provide the option of a reassignment of job tasks.</p> <p>Declared pregnant workers are protected from discrimination by Title VII of the Civil Rights Act of 1964, as amended, while you are reassigned to tasks in which exposure to occupational radiation is unlikely.</p>
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false (Slide Layer)

Radiation Exposure

Causes of Radiation Exposure

Types of Exposure

You need to view all of the content on this slide before you can continue.
Please return and view all of the content.

Return

How We Measure Radiation Exposure

14.11 ALARA

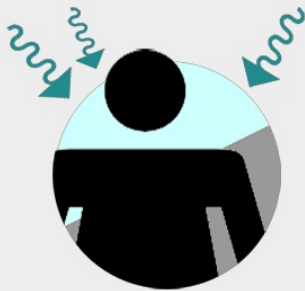
GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

ALARA

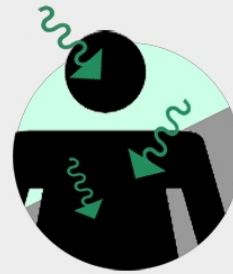
The goal of the ALARA Program is to reduce external and internal radiation exposures to a level that is **as low as reasonably achievable** (ALARA) and well below the DOE limits. Management and radiological control personnel establish policies and procedures for the ALARA Program. However, you, the individual worker, are responsible for keeping your personal radiation dose ALARA.

click on each section to learn more

REDUCING EXTERNAL EXPOSURE



REDUCING INTERNAL EXPOSURE



14.12 Controls and Postings for Protection

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation CONTROLS AND POSTINGS FOR PROTECTION

In support of the ALARA concept, LANL uses various radiological controls to protect workers from exposure to radiation. All areas, materials, and machines that are controlled for radiological purposes are identified by posted signs, tags, or labels, combined with physical barriers where appropriate. The standard radiation caution symbol (trefoil), with the unique color combination of black or magenta on a yellow background, makes radiological hazards easier to recognize.



14.13 Controlled Areas

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

AREAS CONTROLLED FOR RADIOLOGICAL PURPOSES

Established by DOE in 10 CFR 835, areas controlled for radiological purposes are based on the potential for external radiation exposure and/or the potential for contamination.

TYPES OF AREAS

CONTROLLED AREAS	RADIOLOGICAL BUFFER	RADIOLOGICAL AREAS	LEGACY CONTROLLED
Controlled areas have relatively low radiological risk and controlled access and surround radiological buffer areas or radiological areas.	Radiological buffer areas have a relatively higher radiological risk and controlled access and are boundary areas around radiological areas that contain greater radiological hazards.	Radiological areas contain identified radiological hazards; these areas include radiation, contamination, and airborne radioactivity areas.	Some controlled areas are posted as legacy controlled areas. When complete historical knowledge is in question or when radionuclides are known to be present, obtain approval from the Operational Health Physics Group (RP-1) before working on or breaching facility systems, surfaces, or equipment.

14.14 Recognizing Radiological

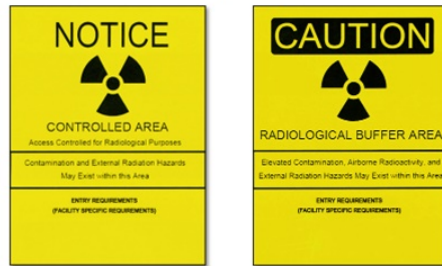
GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

RECOGNIZING RADIOLOGICAL HAZARDS

Areas or materials that are controlled for radiological purposes are identified by one or more of the following:

- yellow and black signs bearing the trefoil with the appropriate radiological control information, posted at areas where radiological hazards exist;
- black or magenta on yellow tags and labels bearing the trefoil that identify specific radiological hazards within an area controlled for radiological purposes;
- yellow and magenta ropes, tapes, chains, or other barriers that define the boundaries of posted areas; and
- yellow plastic wrapping or labeled containers, bearing the trefoil, that package radioactive material.

Radiological Postings at the Laboratory



14.15 Entering Radiological Areas

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

ENTERING RADIOLOGICAL AREAS

Specific training is required to enter (without a qualified escort) different areas controlled for radiological purposes. The DOE divides the workforce into general employee and radiological worker categories.

Completing General Employee Radiological Training (GERT), passing the exam, and completing required facility and job-specific training allow unescorted entry into a controlled area. Other radiological areas require additional training, such as Radiological Worker II. Unless qualified by Radiological Worker Training, workers must to retake the exam every 24 months.






This required training . . .	allows unescorted entry into a . . .
General Employee Radiological Training	Controlled Area
Radiological Worker I Training*	Controlled Area Radiological Buffer Area Radiation Area High Radiation Area
Radiological Worker II Training	Controlled Area Radiological Buffer Area Radiation Area High Radiation Area Very High Radiation Area Contamination Area High Contamination Area Soil Contamination Area Airborne Radioactivity Area
*LANL offers GERT and Radiological Worker II training programs	

14.16 Managers' Responsibilities

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation

RESPONSIBILITIES

Laboratory managers must:








-  help ensure that radiation doses received by workers, visitors, and the public are kept ALARA
-  determine which workers require dosimetry
-  identify radiological workers
-  ensure that their workers have completed appropriate radiological safety training
-  establish radiological control programs at their facilities

14.17 Workers' Responsibilities

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): **Working Around Radiation**

YOUR RESPONSIBILITIES

You are responsible for keeping your personal radiation dose ALARA. **You must**

-  obey all radiological signs and postings
-  follow all radiological and safety rules and procedures, including IWDs and radiological work permits (RWPs)
-  enter areas controlled for radiological purposes only if properly trained or escorted and only when necessary for your work
-  use ALARA techniques to reduce the dose
-  report unusual radiological situations to your supervisor and the radiological control technician (RCT) assigned to your work area
-  be aware of emergency procedures for your work area
-  refresh GERT every 24 months, unless you upgrade to Radiological Worker Training, to continue access into a controlled area

14.18 Emergency Information

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : **Working Around Radiation**

EMERGENCY INFORMATION

Organization » PADOPS » ADNHHO » NCS D

Nuclear Criticality Safety



Nuclear Criticality

Some nuclear materials are fissile materials, which means that if concentrated in a solution or brought closely together as solids in sufficient quantity, they spontaneously emit harmful levels of radiation. Although criticality experiments are conducted as part of the Laboratory's scientific research, a criticality accident results when it occurs in an uncontrolled environment.

A criticality accident is a very localized event, causing injury or death to individuals in the immediate area from an acute, high-level dose of radiation, but typically not causing a physical explosion or equipment damage.

The control of fissile materials to prevent such accidents is called nuclear criticality safety. The Laboratory's Nuclear Criticality Safety (NCS) Division provides nuclear criticality safety expertise to all Laboratory facilities where plutonium and uranium are handled.

If your job assignment involves working with or near fissile materials, you will receive additional training on nuclear criticality safety.

14.19 Emergency Information, Cont.

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT): : Working Around Radiation EMERGENCY INFORMATION, Cont.

Information Specific to Facilities and Work Areas

Emergency procedures and alarms at the Laboratory vary for different facilities and work areas. You should know

- the emergency procedures specific to your work area,
- the warning sirens or alarms specific to your work area, and
- how to contact the RCT assigned to your work area.

In an emergency, call 911



14.20 Course Completion

GENERAL EMPLOYEE TRAINING

END OF COURSE

Congratulations!

**You have now completed the
General Employee Training Self-Study.**

**You must also take the [Exam #43114](#). A score of 80% or
better is necessary to receive credit.**

**You must contact SI-ITS to
schedule
a time to take the exam.**

**Contact SI-ITS at 505-667-0059
or email
esh-registration@lanl.gov
with questions.**

[Click for Credit](#)